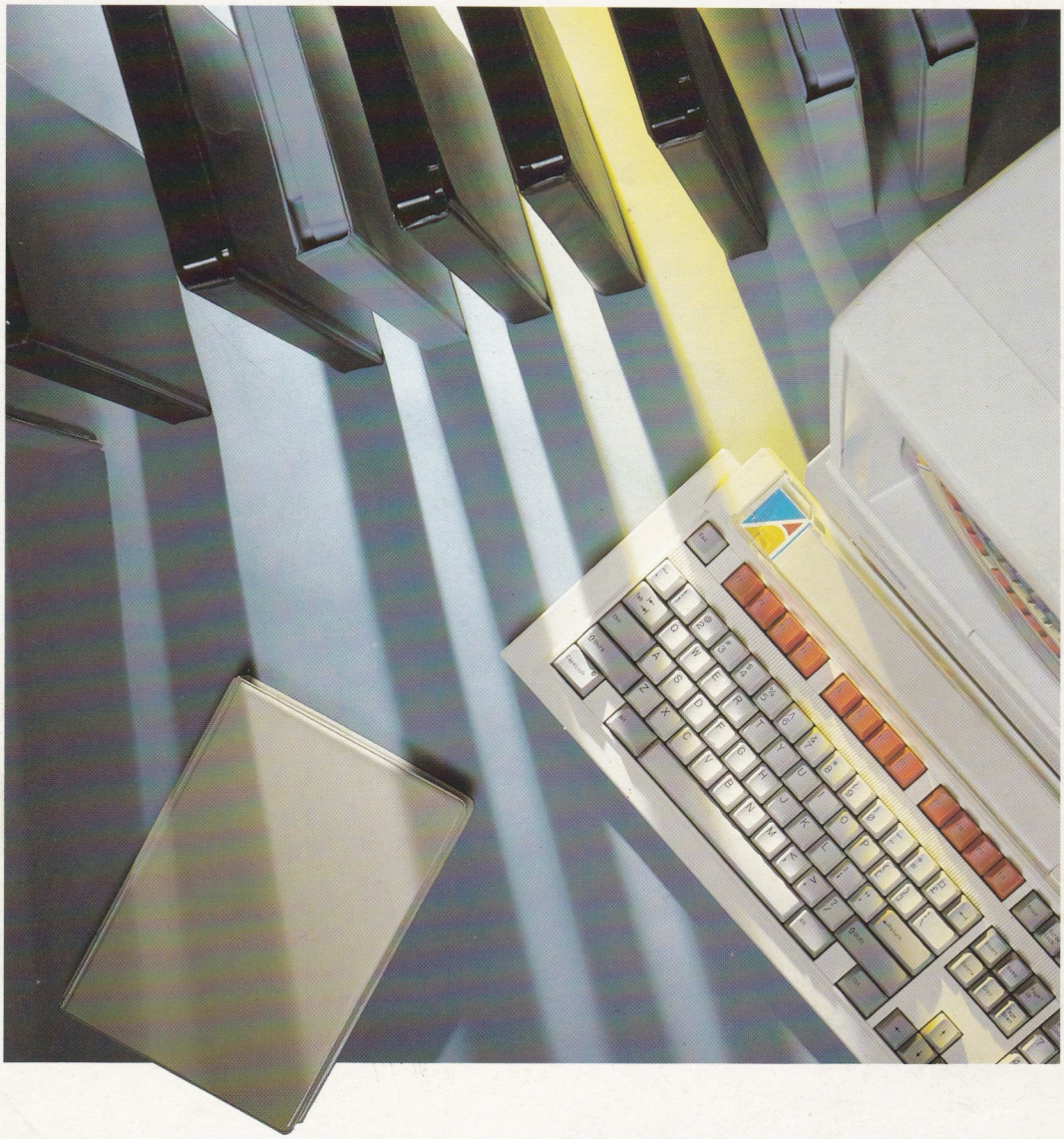
ACORN

HIGH PERFORMANCE COMPUTER SYSTEMS



Hardware expansion and software applications for the Archimedes system

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Hardware expansion and software applications for the Archimedes system

Introduction

The software packages listed in this catalogue have been written for the Archimedes system in native mode; that is, titles that have been written to exploit the full potential of the Archimedes range of high performance computers.

This is not, however, a complete list of all the software packages that can be used with the Archimedes range. Using the optional PC emulator*, for example, the user has access to the thousands of applications that run under the MS DOS operating system.

Additionally, a standard feature of all Archimedes models is the emulator of the processor used in earlier BBC microcomputers. This emulator allows the vast majority of packages written for the Master Series and model B machines to be run on Archimedes systems.

This catalogue also includes many hardware expansion options which add to the general versatility of the Archimedes system and at the same time complement and enhance the use of particular software packages.

How to use the catalogue

To find a software package, or range of packages, use the contents page at the front of the catalogue. All products are categorised, as far as possible, under titles according to area of application. Beneath the name of the package, you will find the supplier's name, followed by a brief description of the product, its application and capabilities. If a product code is required to order the software, it is listed under the name of the supplier.

The recommended retail price is listed if it was available at the time of going to press, and all prices are quoted excluding VAT unless specifically stated.

Wherever possible it is stated which models in the Archimedes range are suitable for any particular package, but for comprehensive details, please contact the supplier concerned directly.

To order a product or for further information, you will find a list of the names, addresses and telephone numbers of all suppliers at the back of the catalogue.

Key
■ – Product
▶ – Supplier
● – Product code
◀ – Price

The PC emulator, which is standard on the Archimedes 310M system, can be used with any Archimedes computer with 1Mbyte or more of RAM.

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MS DOS is a trademark of Microsoft Corporation.

In this catalogue the initials BBC refers to the British Broadcasting Corporation.

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ACCOUNTING

■ *Sales ledger*
▶ *Minerva Systems*
◀ *£64.95 inc VAT*

To use Sales Ledger you must have the System DeltaPlus program as this module needs to access the System Delta commands that the latter contains. Features include: maintaining customer and transaction records; detailed analysis with up to 99 sales analysis codes and 6 rates of VAT; account enquiries; full audit trails; period end close down routines, etc. Customer records showing full status of account may also be output to the printer.

Rapid access to individual accounts can be achieved using name or number to show all transactions. All reports may be selected to any two criteria including a range, over credit limit, by code, 60 day debt, or over a specified balance or turnover, etc.

Reports include statements, aged debtor reports, sales day book report, sales and VAT analysis, control reports, full audit trail showing details of all transactions. Integration with order processing/invoicing and stock management is optional.
For Archimedes 305 and above

■ *Order processing/invoicing*
▶ *Minerva Systems*
◀ *£64.95 inc VAT*

This order processing/invoicing package requires the System DeltaPlus program, because you need the System Delta commands that it contains.

This package monitors orders from entry to invoicing and you can easily design invoices to your own layout with up to five named copies and then as many copies as required. Both cash and credit customers are recorded, with archive facility of names and addresses of both for mailshots, etc. Various discounts on each invoice are possible including % pound or a structure depending on customer and product types.

Automatic document numbering sequence starting from your own specified number is also included, as is free format invoicing or access details from the stock file.
For Archimedes 305 and above

■ *Stock management*
▶ *Minerva Systems*
◀ *£64.95 inc VAT*

To use this stock management package you must have the System DeltaPlus program as this module needs to access the System Delta commands that it contains.

This is an inventory master file holding: stock and analysis codes, location, order quantity, cost and sale price, lead time with current, minimum, maximum and re-order levels that are allocated. It also provides 'on order' and two supplier names, each showing the cost price.

There are unlimited analysis codes with facilities for stock enquiries and rapid access to supplier details. A simple recording system of stock in, out and allocated is included, and it is possible to store up to 12 months of analysis figures.

Other features include: Pareto facility to assist management by indicating which 20% of stock items represent 80% of the cashflow. Integration with Order Processing/ Invoicing is optional.
For Archimedes 305 and above

■ *Purchase Ledger*
▶ *Minerva Systems*
◀ *£64.95 inc VAT*

To use this module you must have the System DeltaPlus program as it needs to access the System Delta commands that the latter contains.

This package features automatic posting of suppliers' invoices, account enquiries, detailed analysis with up to 99 codes, full audit trails, and period and close down routines. Supplier may be output to the printer. The package incorporates post invoices, credit notes, positive and negative adjustments, remittances, and cheques can be cancelled. There is rapid access to individual accounts by name or account number to show all transactions.

Integration with Nominal Ledger module is optional.
For Archimedes 305 and above

■ *Nominal Ledger*
▶ *Minerva Systems*
◀ *£64.95 inc VAT*

To use Nominal Ledger you must have the System DeltaPlus program as this module needs to access the System Delta commands that the latter contains.

This package has full cashbook facilities with journal facilities for adjustments between accounts and double entry controls.

Full accounts can be produced for whatever period the user chooses and simple account and analysis codings make it easy to post entries to specific accounts at the time of data entry. Up to 50 lines are available for each journal entry and up to 10 analysis codes on cashbook entries. Period end and year end close down routines with automatic check on integrity of accounts are possible and account records show movements over each period of the year including opening balances.

Integration with Sales and Purchase Ledgers to update this package is optional.
For Archimedes 305 and above

■ *Micro-Trader*
▶ *Meadow Computers*
◀ *£200.00 inc VAT*

This is a fully integrated professional accounts program consisting of sales, purchase and nominal ledgers. It prints invoices and statements and includes facilities for audit trail, trial balance, profit and loss account and balance sheet.

Up-to-date information, required as the basis for management decisions, can be stored.
For Archimedes 305 and above

■ *Micro-Mailer*
▶ *Meadow Computers*
◀ *£30.00 inc VAT*

The Micro-Mailer program allows access to Micro-Trader Ledgers to print label runs and circular letters. It includes a user-defined database for storing additional names and addresses and frequently used lists of names can be stored on disc for future use.

Letters can be created on all popular word processors.
For Archimedes 305 and above

■ *Micro-Aid Extended Payroll*
▶ *Meadow Computers*
◀ *£49.95*

The Micro-Aid Extended Payroll package is fully integrated with Micro-Trader Accounts. All tax and N.I. codes (except MOD personnel) are covered for up to 400 employees. It prints payslips from the payroll run, and weekly/monthly summaries. Cash and cheque payments and tax/N.I. amounts are updated directly to Micro-Trader ledgers.
For Archimedes 305 and above

■ *Extended Payroll*
▶ *Micro-Aid*
◀ *£57.44 inc VAT*

This is a program to handle wages for up to 400 employees depending on the system, covering weekly, fortnightly, four weekly and monthly pay whether contracted in or out.

Personnel is a BASIC program which accepts up to 46 items of data on each employee depending on the computer. It allows additions, deletions and alterations, P35 listings and automatic alterations to the codes as required by tax notice P7X. A printout of records can be made as required. The program is easy to use and it includes colour to make life simple for the operator.

Payroll is designed to handle the' calculations of wages and N.I. It allows for entry of standard pay, three overtime rates, pension funds, sick-pay, SSP, SMP holiday pay, bonuses, post-tax adjustments, personal pensions and no pay. Payments can be made in advance for individuals if required or left out.

Summaries of a weekly/monthly and period nature are available.

For Archimedes 305 and above

■ *Memo-Calc*
▶ *Micro-Aid*
◀ *£11.44 inc VAT*

This is a database/calcsheet program which allows up to 255 columns. The number of rows is automatically set from 5 to over 1000 depending on the columns declared.

Both numeric and alphameric data can be stored in any cell and can be any length up to 255 characters. Any cell or label can be changed at any time. Searches can be made by number of key field. Column searches can be made on any column and field with all those, =, <or> options being displayed. Sorts can be performed using any column as the key and all other data follows. Calculations using 6 options can be made with the results placed wherever you like by individual cell, pairs of cells, single column, pairs of columns, single rows and pairs of rows. Pre-set function keys can be used for regularly used calculations.

The whole sheet can be printed full width on any size printer from software within the program. There are many uses for Memo-Calc from accounts to diaries, club or personnel records, etc.

For Archimedes 305 and above

■ *Micro-Stock*
▶ *Meadow Computers*
◀ *£75.00 inc VAT*

This package is a stock control program that can be run 'stand-alone' or integrated with Micro-Trader accounts. It stores prices, descriptions and quantities held, on up to 4000 stock items, each item accessed by a user-defined stock code. Invoices and credit notes can be printed, and the package can provide detailed reports on stock holdings and valuations.

For Archimedes 305 and above

■ *Account-Plus*
▶ *Micro-Aid*
◀ *£57.44 inc VAT*

This version of the Account program extends the facilities available by incorporating a program to produce invoices, orders, credit notes, quotations, etc. It also enables you to produce automatic Nominal Ledgers and fully addressed statements as it incorporates most of the random access mailing program by Micro-Aid.

For Archimedes 305 and above

■ *Cashbook*
▶ *Micro-Aid*
◀ *£13.74 inc VAT*

This double entry Cashbook program shows cash and bank credits and debits, i.e., 4 columns.

Any number of individual accounts can be used and analysed or totalled individually or cumulatively by associated group. The printout is paged with the margins, width, column spacing and the number of items per page being set as required by the user to suit his display or printer.

Cashbook can accept about 1500 items in memory.

Nominal ledger printouts are available and the results can be stored and recalled as required enabling users to have a period summary with series totals when needed, e.g. individual monthly and annual cumulative results or for separate departments etc.

For Archimedes 305 and above

■ *Account*
▶ *Micro-Aid*
◀ *£34.44 inc VAT*

This version of the Cashbook program uses random access disc files and can hold up to 2250 entries. Included is a choice of cash/bank or VAT/bank headings. The credit control section offers updates, statements, remittances, creditor and debtor ledger facilities. Individual entries can be adjusted or deleted under password control. Additional entries are verified for valid dates and amounts before acceptance.

There are over 830000 possible account combinations. Ledger sheets and summaries can be printed as well as full accounts. The latest balance is viewable at any time. Searches can be made through the file for any occurrence of any series of characters enabling entries to be found even if an entry error has been made. There is some protection against unauthorised use built in.

For Archimedes 305 and above

■ *Payman*
▶ *Trafford Computing*
◀ *£49.50*

This is a program to calculate and print weekly/monthly payslips. It calculates Income Tax and N.I. contributions and archives data for annual summaries. Ideal for small companies with less than 100 employees. All files are encrypted and protected by passwords.

For Archimedes 305 and above

■ *Ledgers*
▶ *Trafford Computing*
◀ *£69.50*

This is a comprehensive accounts package producing purchase orders, invoices and sales and purchase summaries. The Nominal Ledger archives all transactions. All files are encrypted and protected by passwords.

For Archimedes 305 and above

ART AND GRAPHICS

■ *Artisan*
▶ *Clares Micro Supplies*
◀ *£39.95 inc VAT*

The Artisan graphics package for the Archimedes system runs in Mode 12 and makes full use of windows, icons and the mouse, as well as using standard files for all input and output. Standard screens and sprites are interchangeable with other programs using the Acorn conventions. Artisan uses the power of the Archimedes range to provide you with a program that is easy to use.

A major feature of Artisan is the help window that can be switched on or off and provides on-screen help for all of the functions. Other features include a full screen, with menus all icon based and a fast scrolling zoom with inbuilt editing.

There is an install program on the disc to transfer Artisan to a hard disc. *It can be installed on Econet (site licence is required). Site licences are negotiable.*
For Archimedes 305 and above

■ *Artisan Support Disc*
▶ *Clares Micro Supplies*
◀ *£19.95 inc VAT*

Used to enhance the power of the Artisan, the Artisan Support Disc contains many useful utilities such as additional screens and fonts. Work can be produced in colour on the screen and printed out in full colour.

Features include: a display module to create slide shows; Integrex colour dumps - two qualities available; Epson FX800 colour and mono dumps – Epson mono dumps, one FX and RX; Pattern Editor for mono dumps and an additional six fonts and four screens.

All the utilities work with any Mode 12 screen so the Artisan Support Disc is not limited to Artisan screens.

This product can be installed on, and executed from, a hard disc. Artisan support can be installed on Econet.

■ *Render Bender*
▶ *Clares Micro Supplies*
◀ *£79.95*

This 3D animation package from Clares enables the user to construct scenes using three dimensional objects and ray tracing. In ray traced pictures, all shadows, reflections and refractions are calculated so that the scene appears as it would if constructed of real objects affected by real light sources. Each scene is viewed as through a camera lens of which the position, angle and focal length may be altered.

Variables can be included in the definition for a scene and used to animate objects. The program automatically creates and saves each frame in the animation sequence, which can be run using the supplied display utility program. A still, introductory frame can be added and sound may be used to complete the animated 'film'.

Render Bender comes with example screens and a complete animated sequence. The manual leads the user through many of the sample files which can be used to create a picture straight away. Render Bender can be installed on a hard disc.
For Archimedes 310 and above

■ *ProArtisan*
▶ *Clares Micro Supplies*
◀ *TBA*

ProArtisan is the successor to Clares' Artisan. It is not just a graphics package but is also a graphics manipulation package, which makes full use of 256 colours. While retaining Artisan's original and successful features, ProArtisan provides many additional facilities such as: stepped or graduated fills, sprite fills, circular, vertical or horizontal fills; scaled sprites, sprites cut to irregular shapes; spray can; font designer; variable grid lock; distortion of a sprite to fit any shape. New printer dumps are also provided in mono and in colour.

The package also includes extensive magic brush facilities; variable blending of colours; Bezier curves; text editor with variable sizes; font editor and help facility.

ProArtisan is easy to use, providing a powerful graphics environment for a variety of situations from education to professional graphic studios. ProArtisan can be installed on a hard disc.
For Archimedes 310 and above

■ *Arctist Plus*
▶ *Fairhurst Instruments Ltd*
◀ *£19.95 inc VAT*

This is a 256 colour art package with Full screen editing, 300m pixel edit, fonts and scaling. Other features include video grading, shaded sphere drawing, shaded rectangles, shadowing and Epson screen/area printing. Circles, rectangles, a spray can and colour swaps are available. This product can be installed on, and executed from, a hard disc.
For Archimedes 310 and above

■ *Video Digitiser*
▶ *Watford Electronics*
◀ *£249.00*

This product is a hardware expansion card add-on which will allow video images from a camera, video recorder or other video source to be captured and displayed on the computer's screen. Pictures may then be scaled, magnified, rotated etc., saved to disc, printed out, or used by other applications such as desktop publishing and drawing systems, inspection and image analysis software etc.
For Archimedes 310 and above

■ *Chroma 300 series*
■ *Wild Vision Ltd*
◀ *From £155.00*

The Chroma 300 is a video overlay and genlock expansion card for the Archimedes and enables captions and text to be added to video pictures from a camera or VCR. It does this by mixing the computer's graphics output with a video signal. Any graphics or text generated by the computer may be superimposed in full colour on a video signal.
For Archimedes 305 and above

■ *Archilock*
▶ *The Soft Option Ltd*
● *SMK – Interactive Video*
◀ *£495.00*

Archilock is a video genlock and overlay expansion card providing all the facilities needed to use the Archimedes computer in an interactive video system. It decodes the PAL output from a video disc player into an RGB signal and mixes or overlays this with the RGB graphics from the Archimedes system. The resulting picture can be displayed on the normal Archimedes computer colour monitor.

Special facilities include the ability to fade both the picture from the disc player and the Archimedes computer as well as controlling picture brightness and contrast. An additional serial port can also be provided.

This expansion card together with control software is available from The Soft Option now.
For Archimedes 305 and above

■ *Archie-lock*
▶ *Ably Audio*

The Archie-lock expansion card is designed to synchronise the video circuits of the computer to an external reference signal, which may be either of mixed synchronisations or composite video. This enables the video outputs of the computer to be mixed with, or keyed into, other video signals using a vision mixer. Captions or graphics may thus be added to pictures from a camera or other video source.
For Archimedes 305 and above

■ *RGB-Video Encoder AR7 and AR7E*
▶ *Triangle Television*
◀ *£295.00*

The Triangle RGB-Video Encoder AR7E plugs into the RGB output on the Archimedes system, and encodes the signal into a colour composite video output that can be either recorded on to a normal video cassette recorder or displayed on any television receiver or monitor. The AR7E provides the user with two video outputs, one RF output and an RGB loop output and comes complete with lapel microphone to facilitate the recording of computer graphics with live voice over. The encoder has a luminance bandwidth of 8 MHz and is mains powered.

■ *Prisma-3*
▶ *Millipede Electronic Graphics*

Prisma-3 is a high-performance computer graphics interface expansion card, designed for professional applications in research, graphic design, video and television. A resolution of 1536 x 574 pixels is supported with a range of almost 17 million colours. Image capture from live video and broadcast genlock are standard. A very high level of software support is provided with emulation of the Arthur Operating System graphics functions, with many additions to cover facilities such as real-time animation.

■ *HQ Colour Video Digitiser*
▶ *A & G Electronics*

This is a full colour digitiser with over 1Mb on board RAM to take pictures in one single frame, and 255 luminance levels.

■ *Archimedes Graphics Library*
▶ *Micro Studio*
◀ *£19.95 for 3 disc set*

This comprises a three disc set of more than 100 pictures. Each disc is divided into four sprite files of approximately 200k each. These files may be used with BASIC to display pictures or may be loaded into Clares Artisan and Graphic Writer software packages.

■ *ArtWorker II*
▶ *McSoft*
◀ *£6.00 inc VAT*

This package enables the artist to build up pictures from a series of dots, using the same principle as the Po School.

■ *ArcImEd*
▶ *Jansons*
◀ *£24.95 inc VAT+p&p*

This is a painting package which allows you to draw a picture on the screen, using the mouse, pop-up menus and function keys. What makes it very different from other painting programs is that once you have drawn the picture, you can store it as a basic routine, so that by using ArcImEd you can create graphics and then slot them into your basic programs.
For Archimedes 305 and above

■ *Sound and Graphics Demo*
▶ *Clares Micro Supplies*
◀ *£7.50 inc VAT*

This is a two disc set of demonstrations. Disc one has digitised speech and sound and graphics which include ray-traced pictures, a flight through a wire-framed city and an example of real-time graphics processing which has a 3D mask, spinning and zooming on a multi-coloured background.

Disc two again has ray-traced pictures but this time they are animated. There are two animation sequences. The first is a full colour Newton's cradle with sound effects, and uses 44 frames. You can control the speed of the balls and sound from fast to dead slow. The second animated sequence is the 'Crystal Gallery' and uses 20 frames. The speed of both the pictures and the sound are again controllable by you.
This can be installed on hard disc.
Site licences are negotiable.
For Archimedes 310 and above

■ *Font Designer*
▶ *APL Software*

Font Designer was built to allow you to design the user-definable characters for the Archimedes system with the minimum of fuss.

By using your own defined characters in a program, you get that professional touch. They can be used to tailor the computer's output to whatever application it is working on and, with defined characters, you can allow the computer to communicate in a more intelligible and acceptable form. Wherever the computer uses letters or symbols, the Font Designer is of help. Some of the applications these characters can be used for include: languages, maths, sciences, electronics, geography, wordprocessors, and games.
For Archimedes 305 and above

■ *Artisan Gallery Discs*
▶ *Clares Micro Supplies*
◀ *£6.60 each, £15.00 for the three inc VAT*

This is a package which comprises three discs each with a selection of screens from Artisan. There are nine pictures per disc. This software can be installed on and executed from a hard disc.
For Archimedes 305 and above

■ *I.L.E.C.C. Graphics System*
▶ *Inner London Education Computing Centre*
◀ *£75.00+£15.00 for a machine key*

The I.L.E.C.C. Graphics System is a powerful graphics environment for programming portable interactive applications software. It achieves a high level of functionality via a relatively simple interface, therefore it is easy to learn and use. The source code for any application using I.G.S. requires very few changes in order to run on any machine for which there is an I.G.S. implementation.
For Archimedes 305 and above

■ *Presentation Manager*
▶ *Silicon Vision Ltd*
◀ *£49.95 inc VAT*

This is an interactive graphics system, designed to create, edit and play-back computer controlled presentations. Ideal for lectures and demonstrations, it also handles graph plotting for polynomials and user-defined functions which can be incorporated within the presentations.

This product can be installed on and executed from a hard disc or from Econet.
For Archimedes 305 and above

■ *Presenter*
▶ *Lindis International Ltd*
◀ *£24.95*

Presenter is a presentation graphics program which allows the user to create, modify, print out or photograph high quality colour displays of data in either bar, pie or line format. Data is entered either manually in spreadsheet fashion or can be imported from other spreadsheets or programs in comma separated value format.

Presenter incorporates 3-dimensional displays, auto-scaling axis, user definable layouts and multi-layer graphs.

The product can be used on its own or integrated with Artisan, Graphic Writer and 1st Word Plus. Presenter can also be used with PipeDream.
For Archimedes 305 and above

COMMUNICATIONS

■ *1200-1200 baud Modem*
▶ *Watford Electronics*

The facilities in this package include auto dial, auto answer and auto baud sensing. It is Hayes compatible with 1200 baud full duplex communications. A plug-in upgrade for 2400 baud full duplex will also be available. Full software using the Acorn WIMP interface is supplied.
For Archimedes 305 and above

■ *Hearsay*
▶ *Beebug Ltd*
◀ *£69.00 inc VAT*

Hearsay is mouse driven communications software featuring VT220, VT102, VT52, ANSI, Tektronix, Viewdata and Teletype terminals. A wide range of file transfer protocols are provided, including: XModem, YModem, Kermit and ASCII. Other features include: a telephone directory, call logging, file selector and hard disc install utility. Hearsay drives a wide range of modems.
For Archimedes 310 and above

■ *U-Connect*
▶ *Magenta Research Ltd*
◀ *£59.95 inc VAT*

This communications package is designed specially for the Archimedes system, using the WIMP environment. It offers Teletype and VT100 scrolling screen emulations, and Videotex (Prestel). Files can be transferred using all the common standards – XModem, YModem and Kermit, as well as Prestel downloading using the CET standard. Other features include flexible configuration menus, text review window, phone book database, configurable modem drivers, captive logging, etc.
For Archimedes 305 and above

■ *Spacetech Weather Satellite Podule Evaluation Disc*
▶ *Spacetech*
● *WX041 (1.5BN 1870919 53 x)*
◀ *£5.00 refundable*

This package is a 'carousel' of pictures to demonstrate some of the capabilities of the Spacetech Weather Satellite expansion card, soon to be available.

This product can be installed and executed from a hard disc, and from Econet.
For Archimedes 305 and above

■ *Weather Satellite Display Software*
▶ *Unilab Ltd*

This software enables you to receive signals from the NOAA weather satellite and use the Archimedes computer as a very sophisticated display terminal. Pictures are displayed in 256 by 640 pixels and in 64 tones of grey. N.B. This software requires an I/O expansion card.
For Archimedes 305 and above

■ *Aries 1200 Modem*
▶ *Watford Electronics*

This fully automatic multi-speed modem features auto dial, auto answer and auto baud sensing. Data encryption is included, and the package has Hayes compatibility with full duplex 300/300, 1200/75, 75/1200, 1200/1200 (pseudo) communications. Interfaces include RS423, RS232 and Centronics parallel output.
For Archimedes 305 and above

CONTROL AND MONITORING

■ *Servo*
▶ *Jansons*
◀ *£29.95 inc VAT+p&p*

Servo allows you to control up to four servos (the type used in radio-controlled cars and aircraft) from your computer.

In effect, it gives your Archimedes system up to four 'hands' that it can use – with a little mechanical assistance – to control outside objects like switches, locks, doors, windows, etc.

Servo consists of a small hardware unit, which fits on the Archimedes printer port, a software module and an 'online manual': you supply the servos.

The online manual explains how servos work, shows you how to wire them up, and provides an interactive test environment – so you can check that everything is working properly and can experiment with control values, to see what suits your particular servos.
For Archimedes 305 and above

■ *Miteyspice*
▶ *Those Engineers Ltd*
◀ *£119.00*

The Miteyspice package simulates DC and AC conditions in electronic circuits, and can use 20 parameter Ebers Moll transistor model to establish operating point making it invaluable for testing biassing: a small signal AC analysis can then be performed. Numerical and high-quality graphics outputs are available for voltages and currents anywhere within the circuits.
For Archimedes 305 and above

■ *12-bit Analogue to Digital Converter expansion card*
▶ *Wild Vision Ltd*
◀ *£495.00*

This is an expansion card providing analogue to digital and digital to analogue interface of 12 bit resolution for use in scientific data capture and waveform synthesis.
For Archimedes 305 and above.

■ *IEEE488 Interface Expansion Card*
▶ *Intelligent Interfaces Ltd*
● *Product code: II04*
◀ *£283.91*

An Archimedes computer system fitted with an IEEE488 Interface Expansion Card can communicate with up to 14 test and measurement instruments e.g. DVMs (digital voltmeters), plotters, digital oscilloscopes, spectrum analysers, function generators, counters, logic analysers, programmable power supplies etc.

Areas of application in test and measurement include industrial and academic research and development laboratories, ATE (automatic test equipment) systems, control systems, production test systems, data exchange with Hewlett Packard computers, connecting peripherals, e.g., plotters and printers.

The combination of Acorn 32-bit RISC Technology and Intelligent Interfaces hardware and software design, results in an extremely fast data transfer rate (around 250 Kbytes/s).

The computer can be configured as the system controller or as a simple talker/listener. As the system controller, the computer can send REN (remote enable) and IFC (interface clear) and operates as the controller in charge. It can then address itself, and other devices, to talk and listen and to input and output data. All addressed commands, e.g., GTL (Go To Local) and all universal commands e.g., LLO (Local Lockout) can be sent. The computer can conduct both serial and parallel polls and pass control to another device.

As a talker/listener the computer can, when addressed by the controller in charge, input and output data. It can specify the serial poll STB (status byte) and RQS (request service). The computer can take part in a serial poll and be remotely configured to take part in a parallel poll. It can become controller in charge if control is passed to it by the current controller in charge.

Software in ROM on the expansion card extends the operating system to enable IEEE488 interface operation and presents in a simple low level software interface for assembler programmers. For those programming in BASIC high level software interface is provided by a library of BBC BASIC Procedures and Functions supplied on disc. Libraries of procedures for FORTRAN 77, ISO Pascal and C are available separately.

The ROM expansion card is easily installed in any Archimedes computer. Full instructions are provided in the pack. NB Archimedes 300 series require that a backplane (AK001) is fitted.

This software can be installed and executed from a hard disc or from Econet.
For Archimedes 305 and above

■ *ROM/RAM Expansion Card*
▶ *Acorn Computers*
● *AKA05*
◀ *£59.00*

The ROM expansion card provides a ROM filing system for use on the Archimedes range. It has five vacant sockets into which 16Kbyte, 32Kbyte, 64Kbyte ROMs/EPROMS or 128Kbyte JEDEC EPROMs may be plugged. Each EPROM/ROM can contain several files of varying size. The ROM Manager, provides both high and low level commands for accessing the data in these files.

There are two additional sockets provided for static RAM. Optional components may be added to provide battery backup to these RAM sockets. This allows the data in the RAM to be retained when the power is switched off.

■ *I/O Expansion Card*
▶ *Acorn Computers*
● *AKA10*
◀ *£85.00*

The I/O expansion card allows various existing 6502 BBC peripherals to be connected to the Archimedes system. It is not suitable for the Teletext Adapter, Acorn 1MHz bus, Winchester Drive or IEEE 488 Interface due to software limitations.

The Input/Output interfaces provided are the 1MHz bus, the User Port, and the Analogue to Digital Converter. All three interfaces use the same connectors and pin-outs as those on existing 6502 BBC Microcomputers.

■ *16 bit Parallel I/O Expansion Card*
▶ *Intelligent Interfaces Ltd*
● *Product code: II 10*
◀ *£195.00*

The 16 Bit Parallel I/O Expansion Card provides two separate 16 bit input/output ports. Each port can be configured as either one 16 bit input or output port with two handshake lines, or as two separate 8 bit input or output ports each with two handshake lines. All the data and handshake lines are fully buffered. Other facilities include four 16 bit counter/timers and two 8 bit shift registers.

A relocatable module extends the operating system to enable data input and output, and presents a simple low level software interface for assemble programmers. To simplify the use of the expansion card from BASIC, a library of procedures and functions is supplied on disc. A similar library is supplied to enable the use of the expansion card from FORTRAN 77. An expansion backplane is essential for use with this package. This produce can be stalled on and executed. From a hard disc and from Econet.
For Archimedes 305 and above

■ *Hawk V12-Image Processing System*
▶ *Wild Vision Ltd*
◀ *£995.00*

The Hawk V12 is an image-processing expansion card consisting of a video frame store with real-time image capture and display. The expansion card also contains additional hardware to assist in the processing of images. Thus, coupled with the power of the Archimedes computer, the Hawk V12 can undertake very high performance image processing.

The video frame store memory can be configured as four images 512 x 512 with 256 grey levels, or 16 images 256 x 256 by 256 grey levels. A range of image processing software is available.
For Archimedes 305 and above

■ *Hawk V4-Image Analysis System*
▶ *Wild Vision Ltd*
● *Hawk V4*
◀ *£495.00*

This is an image analysis expansion card consisting of video overlay expansion card and analysis software. Users can draw round objects in the video picture with a mouse, and then make measurements on the objects defined.

This software can be installed on and executed from a hard disc.
For Archimedes 310 and above

DATA MANAGEMENT

■ *Alpha-Base*
▶ *Clares Micro Supplies*
◀ *£49.95 inc VAT*

Alpha-Base is the successor to the highly successful Beta-Base on the 6502 BBC computers. The database is ready to run as soon as you receive it, with no need for programming skills. It configures itself to use as much memory as is available and with a four megabyte machine you can have over 50,000 records in a search list or index.

Alphabase includes the following features: WIMP environment using icons and mouse: free format screens can be painted, and input limits set on each field; multiple display and entry forms, user defined field order for entry of data; plain English entry of search criteria, and super fast sort routine with plain English definition.

There are also sort offsets allowing you to sort on words within a field, and sort a whole file which can be stored in the sorted order. There are five data types including formula and date. This is Winchester compatible with an install program.

Site licences negotiable.

■ *Election II '87*
▶ *Abacus Training*
◀ *£10.00 inc VAT and p&p*

In the General Election of 1987 there were 650 constituencies. Election II 1987 is one of a series of data files and associated programmes containing the results of that election. This data is in a form which is suitable for statistical analysis. The file is divided into 650 records, each record contains the results of one constituency. For each constituency this record contains the number of votes cast for each candidate, along with the number of electors in the constituency. In addition to the data, the disc includes a menu programme which utilises a library of BASIC functions and procedures.

For Archimedes 310 and above

■ *Masterfile*
▶ *Beebug Ltd*
● *0100*
◀ *£22.00 inc VAT*

This is a general purpose database allowing large amounts of information to be stored, amended, sorted and printed etc. Masterfile is easy to use and is suitable for use in home, office or school.

This software can be installed on and executed from a hard disc or from Econet.

For Archimedes 305 and above

■ *Deltabase*
▶ *Minerva Systems*
◀ *£29.95 inc VAT*

This extremely powerful yet simple to use general database is specifically written for the non-technically minded and ready to run as soon as you receive it.

Features include: full menu operation with pull down help panels to explain each option, over 8000 records of up to 255 fields and a record length up to 8000 characters.

DeltaBase sorts over 100 records in fewer than 2.5 minutes and can find any record in less than one second using the Fast Card Find.

For Archimedes 305 and above

■ *System DeltaPlus*
▶ *Minerva Systems*
◀ *£69.95 inc VAT*

System DeltaPlus is a flexible, yet easy-to-use, relational data management system which is capable of handling vast amounts of data in the office, school or home. The database requires no technical knowledge and is sold ready for immediate use. It is unlike other dedicated databases because it has the added flexibility of total file compatiblity with other System Delta applications. It also contains a set of programming commands which can be used to generate relational applications.

It operates in the Acorn window and mouse desktop environment and has up to 2 billion records, 16 million subsets and unlimited record size.

Relational reports are available using the Minerva Reporter package and full mail merge facilities are available by use of the Minerva Mailshot package.

For Archimedes

■ *Reporter*
▶ *Minerva Systems*
◀ *£39.95 inc VAT*

Reporter is a general utility with two functions in mind. It operates under the Archimedes WIMP environment and may be used with DeltaBase and System DeltaPlus. The Full Reporter enables all users to generate complex lists including sub and sub-sub-totalling, with mixed formatted columns.

Accountancy reports may be generated with negatives or positives appearing in the correct debit or credit columns. Output can be the entire file or only those matching specified criteria.

A Simple Reporter facility is included for DeltaBase users to produce quick lists with totalled or averaged columns. This can also be used by System DeltaPlus users as it contains more enhanced features such as automatic paging, etc. The program also has the ability to produce relational reports including information from more than one file at a time.

For Archimedes 305 and above

■ *Oaktree*
▶ *XOB*
● *Oaktree+*
◀ *£32.00*

On hard disc systems and networks, directory structures rapidly become complex. It becomes increasingly difficult to keep track of the overall structure and to move readily through it to keep it tidy.

Oaktree is a package which allows you to see the directory structure of your system at a glance on screen or print them to paper. With simple keyboard commands you may move to any part of the structure, examine files and delete them if required.

For Archimedes 305 and above

■ *Flying Start II*
▶ *Mitre Software Ltd*
◀ *£99.95 inc VAT*

Flying Start II brings together in one package an introduction to database design for the inexperienced, as well as a range of sophisticated capabilities for those who need a productive data manager for all kinds of applications.

With no special commands to learn and remember, the user simply chooses from the menu options on screen to create systems; enter and retrieve data; create reports and labels, from either single or related systems; with built-in flexibility of layout and presentation.

New features include on/off field tagging for cataloguing; set relationship between linked systems; user selectable options in print layout; import from ASCII, comma-delimited, BBC UniForm and ViewStore files, export to ASCII and comma-delimited files for mail-merge, etc. Fully documented and supported by 'Pilot Systems' disc and handbook, Flying Start II provides on-screen help messages specific to each option selected at the touch of the f1 key.

■ *XR Range Optical Mark Readers*
▶ *Kendata Peripherals*
◀ *POA*

This low cost range of optical mark readers will process up to A4 size documents or cards at the rate of approximately one document per second.

OMR does not require special skills. The user makes a simple mark on a form to convey a number, letter, code or description to the computer, and special pens are not needed. Using paper in itself is a benefit.

For accuracy data preparation is performed by the user where errors are easy to detect and correct. The documents or cards which have been marked become the data media. They require no transcription and generate no transcription errors.
Comprehensive validation within the optical reader ensures that only "clean" data is finally transmitted.
For Archimedes 305 and above

■ *Fileman*
▶ *Trafford Computing*
◀ *£51.00*

This is a random access database system with facilities for generating new files from existing ones; classifying and analysing data in any field; displaying the classification in pictorial form and plotting numeric data from any selected records. A software printer dump is built in.

All files are protected by passwords and are encrypted before writing to the disc. A report generator for the above is also available.
For Archimedes 305 and above

■ *The Scrambler*
▶ *Number 3 Software*

The Scrambler is a file protection system that will help holders of personal data files of any size or type held on hard or floppy disc to comply with the Data Protection Act.

All fields are securely encrypted and give a unique personalised password.
The Scrambler is ideal for schools, colleges and offices where confidential files need to be kept safe and access restricted. Supplied as a module on disc for the Archimedes system.
Can be installed on hard disc.
For Archimedes 305 and above

■ *ArcTFS*
▶ *Texcellence*

ArcTFS is dedicated particularly to research, educational and literary use and is essentially a 'free form text' database. It will allow cross-reference, filing and, later, the collation of irregular items of textual data of up to 7700 characters in length related to a common subject or theme. Items can be imported ASCII files, or typed directly. ArcTFS also has the facility to create text files formatted for the word processor, so that sorted collated subsets of text can be dumped without the need for reformatting or retyping.

ArcTFS is ideal for those who need word processing together with a research function for handling irregular textual data. Among its current uses are: filing excerpts from the minutes of business meetings to allow for rapid search and collating; filing data for the composition of any document; filing data on any list of events which need to be re-assembled. Up to 2000 items of 650,000 characters are possible on one 800K disc.

ArcTFS also features its own mouse driven horizontal menu which is fast and accurate.

Text subjects can be exported to 1st Word Plus.
For Archimedes 305 and above

■ *BBC – Archimedes data transfer*
▶ *IFEL*

This kit consists of a lead to connect a 6502 BBC computer to the Archimedes system, a 5.25" disc and a 3.5" disc. The software allows various baud rates up to the maximum of 19200. Any type of file can be transferred, e.g. BASIC, numeric data files, text etc.
For Archimedes 305 and above

■ *Random Access Mailing*
▶ *Micro-Aid*
◀ *£34.44 inc VAT*

This is a disc based mailing program which allows 2500 names and addresses to be stored. Data can be handled in any of the following ways: Straight listing, search by part of name, code, telephone number or contact name, sort by surname and business name correctly, post code, selection code, telephone number or contact name. Label printing is on any size and layout of label with repeat and selection options. Letters can be merged with names and addresses using any word processor with *SPOOL facility.

This is a program for use by club membership secretaries, schools, businesses and anywhere that a versatile record is required.
For Archimedes 305 and above

■ *Mailshot*
▶ *Minerva Systems*

Mailshot is a versatile utility which is presented in two sections. The first is designed to link with word processors to produce mail-merged letters and the second will produce labels to your own designs for up to four across a sheet. All or any part of a data file may be transferred. Mailshot can be used with any of the Minerva databases.
For Archimedes

■ *Matrix – 3*
▶ *Cambridge Microsystems*

This is a 3-D scientific spreadsheet with sufficient capacity for complex modelling.

Three levels of 'help' information are provided, with the novice level fully context sensitive.

An extensive range of cell formate is available for the display and printing of data. The cells are organised as 100 pages, each of which may contain up to 10,000 rows by 10,000 columns.

Most of the spreadsheet manipulative commands can be operated across all three dimensions e.g. move, delete, insert and copy.
For Archimedes 305 and above

DTP AND WORD PROCESSING

■ *1st Word Plus*
▶ *Acornsoft*
● *SKB68*
◀ *£79.95*

1st Word Plus is a mouse-driven word processor which takes full advantage of the user-orientated desktop features of the Archimedes system. It is suitable for both absolute beginners in word processing and experienced users of other word processors.

Its principal features include: a step by step tutorial; help information at any time; the ability to cut and paste blocks of text within and between documents and also to combine text with your own graphics; a 40,000 word spelling checker; and a mailmerge facility. A range of drivers for most popular printers is available, plus information for creating your own printer driver.

For Archimedes 310 and above

■ *Graphic Writer*
▶ *Clares Micro Supplies*
◀ *£29.29 inc VAT*

This is a WIMP-based word processor with the ability to include graphics and various font combinations. Graphic Writer can also be used as a stand-alone word processor. Graphics can be created with the built-in graphics editor or transferred from the Artisan. The package has four main sections:

Page format – this enables you to define things such as page length, header footer space, plus header and footer position. You can also set line spacing and the values for the pad and pound character.

Page composition – this section enables you to place graphics on the mini-preview page. The size and position of the graphic can be altered at any time. You can also have graphics on top of text and still be able to see the text.

Graphics editor – the editor can be used to create scalable graphics that can be placed in a Graphic Writer document. Graphics drawn can be scaled and rescaled without loss of definition.

The word processor – this is controlled using the mouse and windows that select and insert the embedded commands. All normal word processor functions are supported, and you can also control line lengths and margins, etc. Graphic Writer can be installed and executed from a hard disc.

Hard disc possible.
Site licences negotiable.
For Archimedes 305 and above

■ *PipeDream for Archimedes*
▶ *Colton Software*
● *AO1*
◀ *£99.00*

PipeDream combines word processing, spreadsheet and database facilities in such a way that all three activities can be carried out in the same window of a document. It can be used for technical reports, invoices, party invitations, maintaining company accounts, cash flow forecasts, advertising mail shots, etc.

PipeDream has a straightforward menu system and the user interface is simplified by the use of pull-down menus for all commands.

For Archimedes 305 and above

■ *Archimedes Easyfont*
▶ *Argus Specialist Publications*

This pack comprises banner and headline fonts for your classier printouts. It requires an Epson compatible printer.

For Archimedes 305 and above

■ *Spelling Checker*
▶ *Brainsoft Ltd*
◀ *£60.00*

This package checks 270,000 words. It comes as two discs, and includes a text analyser. This package works with the single disc 310 Archimedes.

For Archimedes 310 and above

■ *Spell-Master*
▶ *Computer Concepts*
◀ *£59.00 inc VAT*

The Spell-Master has two parts; a range of star (*) commands that it responds to, accessible from most programs, and an integrated spelling and typing checker for the Archimedes version of INTER-WORD. Other features include almost 60,000 words in a single 128k ROM with test checking up to 10,000 words per minute, crossword, anagram and word guessing features and new ignore dictionary. It requires a ROM expansion card.

■ *TeX*
▶ *Edinburgh Software Products*
● *tex 440*
◀ *£50.00 approx*

TeX is a program that was released into the public domain by its author, Donald E. Kruth of Stanford University and is being supplied by Graham Toal of Edinburgh Software Products on the same basis. Edinburgh Software Products have implemented a full version of TeX for the Archimedes 440 computer to the same standard as mainframe implementations.

ESP have extended the Arthur operating system to add search paths in the manner of VMS, and TeX is compatible with other implementations at the file-system level. It comes with a complete 300dpi font family for laser printers. Currently, PostScript printers can be obtained along with supported and public-domain sources for many other printers.

For Archimedes 440

■ *Fontaid Canon*
▶ *CJE Micros*
◀ *£40.00 inc VAT and £1.00 p&p*

This package is an NLQ Font Designer for the Canon PW1080/1156 and Taxan 810/910 printers. Twenty new fonts are supplied. Two extra font discs are available.

For Archimedes 305 and above

■ *Fontaid Star*
▶ *CJE Micros*
◀ *£35.00 inc VAT and £1.00 p&p*

This package is an NLQ Font Designer for 9 pin star LC/NX/NL printers. Fourteen new fonts are supplied and two extra font discs are available.

For Archimedes 305 and above

■ *PD Discs*
▶ *CJE Micros*
◀ *£3.00 each. Minimum £5.00 charged inc VAT and £1.00 p&p*

There are eleven discs of public domain software, which are mainly graphics or sound demo discs.

For Archimedes 305 and above. Some discs require the Archimedes 310.

■ *Pixel Perfect*
▶ *AVP Computing*
◀ *£79.50*

Pixel Perfect is a flexible desktop publishing page maker, incorporating high quality typefaces and facilities to create a limitless number of other typefaces, icons and diagrams, etc. The graphic information can be positioned anywhere on a grid, enlarged and reduced, inverted, changed from negative to positive, back to front, etc. Essentially, Pixel Perfect combines art, graphics, desktop publishing, computer aided design and word processing programs into a single suite of programs.

Pixel Perfect has an infinite number of uses - producing overhead transparencies, word processing routines, incorporating diagrams for worksheets, school magazines, notices, all kinds of specialised typesetting demands for A-level maths, Greek, French, German and special technical symbols of all kinds.

For Archimedes 305 and above

■ *First Fonts*
▶ *Ian Copestake Software*
◀ *£19.00*

First Fonts are software extras for use with 1st Word Plus on the Acorn Archimedes system. They provide for the display and printing of special character sets e.g. for maths, physics, languages, also design of stationery and forms.

First Fonts support printer features not normally available with 1st Word Plus, such as true proportional spacing, combined with full justification and centring. They also allow you to use alternative typefaces either supplied or already in the printer.

For Archimedes 305 and above

Printer Utilities

■ *Printer Module*
▶ *CCD Computer Services*
◀ *£12.50*

Load the Printer Module from disc and your Archimedes computer instantly has a versatile printer buffer which allows you to carry on programming while your printer is churning out paper. The buffer is easily configured to any size from 1 kbyte up to the maximum available RAM in the computer, and can be used with both serial and parallel printers. Fully compatible with the vast majority of languages, word processors, text editors, databases, etc.

The module also has very fast text and graphics screen dump commands to copy the screen to Epson FX compatible printers.

For Archimedes 305 and above

■ *Colour Dumps*
▶ *Musbury Consultants*
◀ *£30.00 inc VAT*

The program uses an Integrex 132 ink jet printer and works with all modes including the high resolution modes that require a multi-sync monitor. They will reproduce any colour from the full palette of 4096 possible colours.

Three types of dumps can be used: the standard dump which produces a printout 7.6 inches by 6.05 inches (you can also select 9.45 inches by 7.6 inches and 19 inches by 15.2 inches). A picture this size is printed in two long horizontal strips.

It is possible to have all three sizes of dump module loaded at the same time.

For Archimedes 305 and above

■ *ARC Buffer Module*
▶ *Clares Micro Supplies*
◀ *£19.95 inc VAT*

The ARC Buffer Module is a printer and serial buffer. Each buffer can be configured from just a few bytes up to 4 Megabyte, to allow for future expansion. The buffer is totally legal, and is transparent to the user. [ESCAPE] has been trapped so as not to lose the buffer contents.

LPrint, a further feature sends a string or macro to the printer and you can also set up macros to set the printer to do such things as bold, italic underline using just one LPrint command.

ARC buffer is useful when printing long documents, databases, labels or graphics. All current Clares programs allow you to exit a program without losing the contents of the buffer and the buffer comes with notes on how to alter earlier programs to achieve the same effect. A file that takes 4 hours to print can be sent to the buffer in minutes, so that you can work on the computer without having to wait for the printer to finish. The ARC Buffer Module can be installed on, and executed from, a hard disc.

Site licences negotiable.
For Archimedes 305 and above

■ *MiniDump*
▶ *Abacus Training*
◀ *£5.00 inc VAT and UK p&p*

The MiniDump RM is a screendump relocatable module that complements the rather larger dumps HardCopyFX etc., provided by Acorn on Archimedes Welcome disc.

MiniDump maps the full size screen to a printout of about 3.5 inches by 4.5 inches and takes into account changes of origin and graphic windows defined by VDU 24.

For Archimedes 305 and above

■ *DumpLQ*
▶ *Abacus Training*
◀ *£5.00 inc VAT*

The Epson LQ800 printers have more facilities than the Epson FX range. Abacus Training have developed a screen dump for the Epson LQ800 printer which uses the printer mode 39. This mode is sometimes known as 'Triple-density' but is more accurately described as 180 dots/inch horizontally. The spacing between adjacent pins of the 24 pin head is 1/180 inches which in this mode gives equal resolution both horizontally and vertically.

The mapping chosen gives a size of about 7.1 inches x 5.7 inches which fits neatly across an A4 page.

■ *FORMS1*
▶ *Datathorn Sytems Ltd*
◀ *£17.00*

"FORMS1" is a dedicated form design program for the Epson GQ-3500 laser printer. Forms may be created, stored, edited and installed in the printer – up to eight at a time. Forms may be layered and overprinted in one pass using any word processor, or other software. This package is ideal for schools, colleges, universities and businesses of all sizes.

For Archimedes 305 and above

■ *Grey Dumps*
▶ *Musbury Consultants*
◀ *£15.00 inc VAT*

This package is a relocatable module that allows the production of multi-toned monochrome screen dumps. The tones are printed in the same way as you would see them on a black and white monitor. It is suitable for all types of Epson printers and compatibles. Printouts are in three possible sizes: 9.45 inches × 7.6 inches, 19 inches × 15.2 inches and 7.6 inches × 6.05 inches. The largest size is suitable for a poster: it is printed in two long strips.

HEALTHCARE

■ *Healthdata 'off-line'*
▶ *Healthdata*
◀ *£14.95 inc VAT*

This is a health information and education database suitable for Human Biology GCSE and personal and social affairs. The database includes more than 400 frames from the Healthdata 'on-line' service, covering a wide variety of important health topics.

The information on AIDS, sexually transmitted disease and contraception is fully up-to-date, in contrast to many conventional textbooks in this area.

For Archimedes 305 and above

■ *DIGIT*
▶ *Institute of Ophthalmology*
◀ *£150.00*

This package measures objects that are in photographs or maps traced on a digitiser tablet, or on video screens captured with the Watford video digitiser. The following measurements are made: point count, linear distance, width, area, perimeter, Feret (caliper) diameters, including maximum, minimum and mean diameter, and shape factors. Measurements may be printed, edited, stored to disc and shown as histograms with mean and standard deviation.

For Archimedes 305 and above

■ *DISTIT*
▶ *Institute of Ophthalmology*
◀ *£50.00*

of objects traced within DIGIT and shows whether they are randomly or regularly distributed. Distribution is analysed by nearest neighbours and by comparison with regular and random distributions of the same density. Results may be stored, printed, and shown as nearest neighbour histograms with statistics.

For Archimedes 305 and above

■ *3DIGIT*
▶ *Institute of Ophthalmology*
◀ *£50.00*

Sections or contours traced with DIGIT may be aligned and reconstructed on the screen with control of magnification, perspective, position and rotation around the X, Y and Z areas. Grey shading may be used to show depth in the 3D view. 3D reconstructions may be saved to disc, printed out, and enhanced with a digitiser controlled art program. 3D measurements may be made and animation shows the effect of realtime rotation of the reconstruction.

For Archimedes 305 and above

■ *Cognitive Rehabilitation Suite*
▶ *Burden Neurological Institute*
◀ *FREE*

This is a suite of 56 programs designed to stimulate and challenge recovering head injury patients. This material has also been used with stroke patients. These programs are available free of charge to anyone working in the National Health Service or in any other non-profit organisation.

Hard disc. Econet. No site licence.
For Archimedes 305 and above

■ *Novoclone Microplate Software*
▶ *Novo Biolabs Ltd*
◀ *P.O.A.*

This is a complete microplate data handling package with interface to flow Multiskan MCC/340 and Molecular Devices VMAX photometers. Its features include polynomial and 4-parameter logistic curve fitting, plate format libraries, data storage and data file transfer. A programmable statistics package is also included.

A hard disc is desirable, but not essential. The software can be installed on, and executed from, Econet. A site licence is required.

■ *DISMAP*
▶ *Institute of Ophthalmology*
◀ *£50.00*

This is a package which maps the distribution of objects in two dimensions, e.g. cells in cell sheets or sections. The software interpolates counts or densities between measured samples, and draws a map on the screen which may be printed and stored to disc. Interpolated values on the map may be joined with contour lines using a digitiser-art program to produce the final contour distribution map.

This software can be installed on and executed from a hard disc.

For Archimedes 305 and above

■ *GRAPHDATA*
▶ *Institute of Ophthalmology*
◀ *£30.00*

This package uses a digitiser table is used to read data from existing graphs, either as points or as a continuous trace. Data may be stored to disc, printed, edited, combined and then replotted on new axes with full control over the plotting parameters and then dumped to an FX80 compatible printer. A digitiser-art program allows further editing of the graph.

This product can be installed and executed from a hard disc.

For Archimedes 305 and above

Languages

■ *Little Smalltalk*
▶ *Smalltalk Express*
◀ *Little Smalltalk (disc only) for Archimedes £7.50*
Little Smalltalk (disc + book) £32.50

Little Smalltalk is a package written in the 'C' language for both DOS and/or Unix systems and is very portable within each environment. The implementation is as faithful as possible to the world of Smalltalk-80 although there are many aspects which have been excluded to keep it simple. Many of the popular computers available today, as well as dumb terminals on mainframe computers, are able to use the character mapped screen supported by Little Smalltalk.

The disc has both the binaries and sources on it. You are requested to make reference to the original author if Little Smalltalk should form part of your work.

For Archimedes 305 and above

■ *FORTRAN 77 (Release 2)*
▶ *Acornsoft*
● *SKL72*
◀ *£99.00*

FORTRAN is one of the most widely used of all computer languages. Originally designed for mathematical computations, it has become the predominant language in scientific research, engineering and Computer Aided Design applications.

Acornsoft's FORTRAN for the Archimedes computer follows the FORTRAN 77 standard and so facilitates portability of existing applications. Optional extensions to the standard include WHILE loops, block DO statements, complex *16 data types and a FORTRAN 66 switch.

Release 2 provides support for the Archimedes Symbolic Debugger (see the Archimedes Software Developers Toolbox), the ability to handle large files and routines to access features of the operating system (OSWORD, OSBYTE and OSCLI).

Supporting products are available as for ANSI C on the Archimedes system. In addition, see Operating System and Graphics Libraries for FORTRAN 77.

■ *ANSI C (Release 2)*
▶ *Acornsoft*
● *SKL70*
◀ *£99.00*

The C programming language is widely used for graphical, numerical, text-processing and database software, and the design of operating systems and compilers. It is the most versatile modern computer language for professional applications, and as a result is also increasingly in demand for specialist computer training and education.

Archimedes ANSI C is a full implementation of the draft ANSI standard language definition. In addition, Archimedes ANSI C includes a 'portable C compiler' option, following the Unix pcc de facto standard. This compliance with the established standards facilitates portability of existing applications.

The ANSI C package includes the C compiler, the ANSI library of over 100 functions, the Linker and an interface library giving access to the special input/output features of the operating system which allows the C programmer to take full advantage of the graphics, sound and Window Manager.

Products available to increase the power and productivity of Archimedes ANSI C include the Software Developer's Toolbox, the Assembler, the Twin program editor and the Programmer's Reference Manual.

For Archimedes 310 and above

■ *ISO – Pascal*
▶ *Acornsoft*
● *SKL38*
◀ *£99.00*

Pascal is a high-level computer language for learning programming as a systematic discipline, which combines clear notation, many similarities to BASIC and encouragement of structured program design.

Archimedes ISO Pascal conforms to the ISO 7185 standard, and the British Standard 6192:1982, and provides extensions to the standard that can be used optionally. These include linkage of separately compiled modules, compilation from more than one source file, import/export functions, procedures and variables, and inclusion of in-line assembly language statements.

Supporting products are available as for ANSI C on the Archimedes system. In addition see ISO Pascal Extensions.

■ *Lisp*
▶ *Acornsoft*
● *SKL14*
◀ *£199.00*

Lisp was originally developed to provide support for an on-going research project in computer algebra. It is intended for running experimental programs, and so makes a policy of checking for exceptional cases and provides clear and concise diagnostics.

The Archimedes (Cambridge) Lisp system is, to a large extent, compatible with a proposed LISP standard put forward by Professor A.C. Hearn and others of the University of Utah and the Rand Corporation. Lisp includes an editor, implementation features such as PRESERVE and LOAD-ON-CALL FACILITY, I/O routines, evaluating functions and debugging functions.

For Archimedes 310 and above

■ *Prolog X*
▶ *Acornsoft*
● *SKL68*
◀ *£199.00*

Prolog is a simple but powerful programming language originally developed at the University of Marseilles as a practical tool for programming in logic. Prolog is especially suitable for high-level symbolic programming tasks and has been supplied in many areas of Artificial Intelligence research.

The interactive Archimedes Prolog X system consists of an incremental Prolog compiler, a run-time system and a wide range of built-in (system-defined) procedures. The system is closely compatible with DEC system-10 Prolog.

For Archimedes 310 and above

■ *Twin*
▶ *Acornsoft*
● *SKL44*
◀ *£29.00*

Archimedes Twin is a professional programmers' text editor. Designed and developed at the Acorn Research Centre in Cambridge, Twin is used for programming by Acorn's own software development engineers.

Programming has different text editing requirements from conventional word processing, although some features are similar. Twin has been designed for quick and easy program development.

Archimedes Twin can be used with all Archimedes programming languages, including ANSI-C, FORTRAN 77, ISO Pascal, BASIC and Assembler. Structure templates can be created to lay out routines and procedures in the correct format for the language in use.

Twin was named after its two-window facility allowing compilation errors to be displayed in one window while the corresponding source code is edited in another. At the same time, a concurrent process such as the compilation of another program can run in the background.

Archimedes Twin forms part of a set of programming languages and development tools that make the Archimedes range into a formidable powerhouse software development system.

For Archimedes 305 and above

■ *Assembler*
▶ *Acornsoft*
● *SKL64*
◀ *£199.00*

Programming in Archimedes Assembler offers direct access to the full Archimedes ARM (Acorn RISC Machine) central processor instruction set. With the exceptional speed of the ARM cpu, high-level languages can be used for virtually all applications, but the Archimedes Assembler delivers the total performance of Archimedes RISC architecture to the most demanding programmers.

Archimedes Assembler comprises three programs, together with a comprehensive manual:

- Aasm Assembler files written in Assembler for immediate execution
- ObjAsm Assembles files written in Assembler into Acorn object Format (AOF)
- Linker Links AOF files, either written in Assembler and assembled using ObjAsm, or created by high-level language compilers

Supporting products are available for use in conjunction with Archimedes Assembler:

- Archimedes Software Developer's Toolbox
- Archimedes ANSI C, Pascal and FORTRAN high-level language compilers
- Archimedes Twin program editor with text editing facilities

For details see other product packages

For Archimedes 310 and above

■ *ArchiText*
▶ *Hopesoft*
◀ *£24.90 inc. manual and template*

ArchiText is a new text editor developed specially for the Archimedes system. It uses a mouse for super-fast text selection and scrolling and for menu choices of delete, copy and move.

Up to five text files can be opened for editing at once, and one or two can be displayed on one screen with variable size windows. There is a single key switch between text file displays and up to five position markers for each file.

For Archimedes 305 and above

■ *Operating System and Graphics Libraries for FORTRAN 77*
▶ *CCD Computer Services*
◀ *£49.50 inclusive*

The FORTRAN Graphics library has over 90 subroutines to add powerful graphics capabilities to the FORTRAN 77 compiler,
graphics statements, and a set of routines for generating graphs, histograms, pie-charts, etc.

The new FORTRAN Graphics library package now includes an operating system library that allows FORTRAN programs to access machine SWI's and hence make better use of sound, Window manager, filing systems, etc.

For Archimedes 310 and above

■ *XED Text-File Editor*
▶ *CCD Computer Services*
◀ *£19.50 inclusive*

This is an editor designed specifically for creating and editing text files (Fortran, Pascal and C programs, command files, etc). Up to 5000 lines of text can be worked on. Features include: full-screen editing driven by mouse and function keys; an editing command language which can be used to input and output files to and from text; and access to the operating system, giving full access to star (*) commands. This package has the ability to compile and run programs from within the editor.

For Archimedes 310 and above

■ *ISO Pascal Extensions*
▶ *Smith and Wiggins*
◀ *£30.00*

This is a package which provides, via nine Pascal Modules, over 190 routines to give the Pascal programmer access to graphics, sprites, strings, the window manager, fonts etc. The package, comprises a 3.5 inch disc and 24 page manual.

It will be of use to educational establishments using Pascal as a teaching and development language on the Archimedes computers.

For Archimedes 310 and above

■ *Floating Point Assembler*
▶ *Abacus Training*
◀ *£12.50*

This package uses Floating Point mnemonics from within the BASIC Assembler. These mnemonics include division, logs, square roots, etc. Extended precision of the Assembler gives 19 significant figures in base 10, with conversions between scientific notations and packed binary coded decimal. The Assembler is written in BASIC for use with APPEND, LIBRARY and INSTALL and accepts BASIC variables names for Floating Point registers and immediate values. The program examples include extended precision square roots and pi.

■ *ARC-Basic Compiler*
▶ *Silicon Vision Ltd*
◀ *£99.95 inc VAT*

The ARC-BASIC compiler is a package which converts Archimedes BASIC programs into pure ARM machine code. It produces relocatable modules and cross references all variables, functions and procedures. Floating point of Integer support is included as are the stand alone code and the optimising compiler.

No royalties are required on the compiled code.

This product can be installed on and executed from a hard disc or from Econet.

For Archimedes 305 and above

General utilities

■ *DFS Utilities (including DFS Reader)*
▶ *CJE Micros*
◀ *£20.00 inc VAT and £1.00 p&p*

This is a comprehensive suite of utilities which will transfer all, or selected files, on a disc, from DFS to ADFS, or from ADFS to DFS. A formatter for DFS is included.

For Archimedes 305 and above

■ *Archimedes Toolkit Plus*
▶ *Clares Micro Supplies*
◀ *£49.95 inc VAT*

This new extended version of ATM has many new features. All of the features of ATM have been retained in Toolkit Plus and many new features have been added. The features now available include:

- 10 Fast memory and disc editors
- 8 Fast memory and disc searches
- Fast scrolling disassembler
- A one line assembler
- Memory shift, swap and compare
- Catall Exall and Dirall for discs
- Winchester compatible
- AGET and APUT disc sectors
- Fastload and Fastsave of screens (5 times faster)
- A series of commands to list all SWIs, give SWI numbers for names and names for numbers
- Many commands to search a disc for filenames including wildcards, specified filetypes, specified dates or a combination of these parameters

Plus:

- Archiving. With this utility you can backup your hard disc complete or just those files that you want to backup. This is a very easy to use utility that will protect you from losing masses of data if your hard disc crashes.
  This product can be installed on and executed from a hard disc.

Site licences are negotiable.
For Archimedes 305 and above

■ *Helping Hand*
▶ *Data Store Software*
◀ *£23.00 inc VAT*

Helping Hand is a collection of Advanced Disc Filing System utilities, some in the form of *Commands (which could be used within programs) and others mouse-controlled. Loaded as a relocatable module. Example commands include disc tree diagrams, file location commands and archiving utilities.
For Archimedes 305 and above

■ *ROM/RAM Expansion Card*
▶ *Computer Concepts*
◀ *ROM/RAM card (standard) £56.35 inc. VAT*
◀ *ROM/RAM card (battery fitted) £67.85 inc. VAT*

The ROM/RAM expansion card allows both ROM and RAM to be installed in all models of the Archimedes range. It provides the necessary interface software, in an on-board ROM, for all normal filing system operations.

Each expansion card has eight sockets, one of which contains the interface software, leaving seven available. Every socket will accept either a ROM or a RAM chip. A total of up to 896 Kbytes of any mixture of RAM or ROM may be fitted. Multiple cards may be fitted to provide an even bigger linear capacity.

The RFS is the RAM/ROM filing system. This provides all of the usual filing system facilities.

Any combination of RAM chips will appear to the RFS as a single linear block of file space (note: it does not extend the normal RAM area of the machine itself). BASIC programs can be saved in the usual manner, any file can be copied into the RAM filing system with *COPY, files can be deleted, lock/unlocked, catalogued, executed, etc.

Archimedes 305 and 310 models require the installation of an additional 'backplane' before any interface expansion cards may be fitted.
For Archimedes 305 and above

■ *PassMan*
▶ *XOB*
● *Passman+*
◀ *£28.00*

The password management system allows the system user to keep track of all users registered on the file-server (Acorn Level II, III and Filestore Econet Systems).

On level II systems the following details may be displayed:

A Boot option for all users or system users only, with or without passwords, users in original or alphabetic order; data to be printed to screen, printer or file.

Filed data may be used to facilitate changing user parameters using the software supplied or that written by the user.

On level III and Filestore systems all the above are possible as is free space allocation of the user. Groups of users may be searched for.

The major advantage of the package is that the status of the entire user population may be viewed at a glance. It is possible to check regularly for users who have illegal options, or who may have illegal system status.

Software is included to illustrate a range of applications for the data gathered (e.g. setting up options for entire groups of users).
For Archimedes 305 and above

■ *The Scrambler*
▶ *Number 3 Software*
◀ *£14.95*

The Scrambler is a module that will enable you to encrypt any file of any size held on disc. It is menu driven using a mouse. It works independently of any application but can connect with some applications, such as BASIC and TWIN.

The software can be installed on and executed from a hard disc.
For Archimedes 305 and above

■ *Desktop Enhancer*
▶ *Mitre Software*
◀ *£29.95 inc VAT*

This package provides direct, mouse-driven access to the Arthur operating system, to resident and disc-based programs and to directory and file handling routines, in one consistent working environment. Window titles are given as full path names.

Loaded as an extension to the ROM-based Desktop supplied with the Archimedes, the Enhancer allows the user to display directory maps; make, set and delete directories; find, timestamp, access, print and change type for any file. Disc handling facilities include name/rename, format, copy, display free space, compact and backup hard disc to floppies.

The Mitre Desktop Enhancer allows you to run BASIC and execute EXEC files (* commands), clear screen before running programs, 'pause' to read screen messages before returning to Desktop after running programs, save/restore Desktop and colour palette and set mouse speed. Programmers will find the Mitre 'Make desktop' utility particularly useful. The Enhancer will also automatically load any utilities or accessories you may have written, and the Set-up facility allows you to edit, save and load machine configurations.
For Archimedes 310 and above

■ *Archimedes Programmer's Utilities*
▶ *Ralph Allen Engineering Company*
● *cgu*
◀ *£38.80 inc VAT and manuals*

The utilities included on the discs were produced during the development of a major software project on the Acorn Archimedes computer. Some were adapted from various sources, some were specially written to support the project, and some were provided to make good deficiencies in existing software support for the Archimedes range.

MicroEMACS was chosen as the editor since it is in common use across a wide range of machines and has become somewhat of an industry standard. MicroEMACS, like most worthwhile pieces of software, can take some time to master. This implementation is a complete version, including MAGIC and CRYPT modes. It works in either of two screen resolutions, which may be switched mid-edit. It does not support colour screens or the mouse as yet.

KERMIT was chosen as the communications program as it must be present on a greater variety of machines than any other package. Both EMACS and KERMIT are interactive, so they can be called from the desktop and then 'driven' from their internal menus.
For Archimedes 305 and above

■ *Directory Manager*
▶ *XOB*
● *DIRMAN+*
◀ *£32.00 (includes network licence.)*

When re-arranging and tidying directories it is inconvenient to have to constantly change between the various utilities needed for this process. Typically a Network Manager would use *ACCESS, *RENAME, *DELETE, (or *WIPE), *INFO, *CAT and *DUMP. The use of *WIPE and *DELETE is critical. At any time an error could result in loss of valuable material.

With this package the entire directory contents are visible on screen without the need for repeated CAT commands. Files may be accessed, renamed, deleted and undeleted with single-key commands. The file parameters are in view as the file is considered. It is possible to change and re-change your decisions as to the fate of a file and work backwards and forwards through the directory. Only when you are satisfied that all the changes are correct will they be carried out. In this way there is little chance of making a wrong decision in the heat of the moment. Directory Manager will be useful for any user with files to manage, but it is particularly useful for the Network Manager and 400 series.
For Archimedes 305 and above

■ *Archimedes Software Developer's Toolbox*
▶ *Acornsoft*
● *SKL58*
◀ *£199.00*

This package has been created by Acorn to place a package of powerful facilities at the disposal of all serious programmers.

The Arthur Symbolic Debugger is a source-level utility that traces bugs in the source code of programs written in Archimedes ANSI C, FORTRAN 77, and ISO Pascal. By using this debugger you can save considerable time compared with compiling programs containing bugs, subsequently dealing with the compilation of run-time errors.

The Archimedes Software Developers Toolbox forms part of a set of programming, languages and development tools that make the Archimedes range into a powerful software development system.

Products for which the Archimedes Software Developers Toolbox is suitable includes the following packages:

- Archimedes Twin progam editor with text editing facilities specially designed for program development
- Archimedes Assembler
- Archimedes ANSI C
- Archimedes FORTRAN 77
- Archimedes ISO Pascal

NB. For details see other product packages.

Other operating systems

■ *Virtual 68000 Development System*
▶ *Dobsoft*

The Virtual 68000 Development System enables popular 68000 microprocessor based software to be developed, executed, and debugged on the Archimedes range.

The package includes an assembler, disassembler, monitor and an emulator to execute the code. Once the software has been tested, the code can be installed on a 68000 based machine.

Options include facilities for additional software for maths co-processors and other 68000 series microprocessors.
For Archimedes 310 and above

6502 BBC to Archimedes Transfer

■ *BBC to Arm Utilities*
▶ *RESOURCE*
● *PE036*
◀ *£15.95*

This package provides a number of useful utilities for conversion of programs from the 6502 BBC Machine to the Archimedes system.

This software falls into two groups: firstly, utilities that include programs to convert 6502 BBC system screen images, GXR sprites, and user defined graphics characters into a readable form on the Archimedes systems. Secondly, there are two emulators on the disc: one, a 6502 emulator, and the second an extended 6502 emulator which additionally provides DFS emulation, intercepts a number of operating system calls and deals with user-defined graphics characters.
For Archimedes 305 and above

■ *BBC – Archimedes Serial Transfer Kit*
▶ *Watford Electronics*
◀ *£25.00*

This simple data link allows any data to be transferred from 6502 BBC machines to an Archimedes system at up to 19200 baud. The kit is supplied with one disc of 3.5 inches format for the Archimedes system, containing the transfer software and the necessary cable to connect the two computers.
For Archimedes 305 and above

■ *Archimedes <> BBC RS423 Link Kit*
▶ *CJE Micros*
◀ *£15.00 inc VAT £1.00 p&p*

This package includes file transfer software and cable.
For Archimedes 305 and above

■ *BBC – Archimedes Serial File Transfer Program*
▶ *Innocent Software*

This program, supplied on 5.25 inches disc, allows file tansfer from existing BBC machine fitted with 5.25 inches disc drives to the Archimedes system via a cable connected between the RS423 ports. The package consists of a BASIC program, together with simple instructions on moving the transfer program from 5.25 inch disc to the Archimedes system, and a diagram and construction details for the connecting cable. Full instructions on using the transfer program are included.
For Archimedes 305 and above

■ *BBC to Archimedes Disc Conversion Kit*
▶ *Brainsoft Ltd*
◀ *£14.00*

The software allows the user to transfer programs data word processor files, etc, from 6502 BBC microcomputers to the Archimedes computer. The 6502 BBC micro is turned into a disc drive and is controlled as such from the Archimedes desktop. Comprehensive instuctions are provided which explain transferring programs/text from BBC into the Archimedes system, and vice-versa. The speed can be set by the user from 75 Baud to 19200 Baud. All interchange between computers is automatic and under the control of the user.

The kit is supplied with two discs, one 3.5 inches disc for the Archimedes computer, a 5.25 inches disc for the BBC and the necessary RS423 cable for connecting the computers.
For Archimedes 305 and above

■ *Text Editor*
▶ *Brainsoft Ltd*
◀ *£5.00 on Desktop*

This is an optional 10,000 line text editor for the desktop. It is WIMP based, allowing two editing windows and cut and paste features.
For Archimedes 310 and above

■ *Serial Link Kit*
▶ *Beebug Ltd*
● *0796*
◀ *£18.16 inc VAT*

This kit enables files to be transferred between 6502 BBC computers, and the Archimedes system, in either direction with the minimum of fuss. The software is mouse driven and compatible with DFS and ADFS. The kit contains software on disc, three metre cable and user instructions.
For Archimedes 310 and above

Hardware section

■ *External Drive Interface*
▶ *CJE Micros*
◀ *£30.00 inc VAT £1.00 p&p*

This package is a buffered disc interface that allows an external disc drive or drives to be connected to an Archimedes machine. The product has link options.
For Archimedes 305 and above

■ *Drive Swap Switch*
▶ *CJE Micros*
◀ *£8.00 inc VAT £1.00 p&p*

This pack for the External Drive Interface from CJE Micros, makes external drive '0' into external drive '1'. It is ideal for the PC Emulator as 5.25 inch drive becomes A: Internal B:.
For Archimedes 305 and above

■ *5.25 inch Disc Drive Interface*
▶ *Beebug Ltd*
● *0796*
◀ *£29.05 inc VAT*

You can connect up to four external disc drives to your Archimedes computer with this fully buffered disc drive interface. It requires no soldering and fits neatly at the back of the Archimedes.
For Archimedes 305, 310 and 440

■ *Archimedes 5.25 inch/3.50 inch disc drive interface*
▶ *Watford Electronics*
◀ *£19.00*

With this interface it is possible to connect almost any 5.25 inch/3.50 inch disc drive with its own power supply to the Archimedes system. No soldering is involved. Supplied complete with necessary lead.
For Archimedes 305 and above

■ *Fully Buffered External Drive Interface*
▶ *Dudley Micro Services*

This product allows the addition of external drive, so that 5.25 inch discs can be run on the Archimedes system.
For Archimedes 305 and above

■ *Drive Select Translation Cable*
▶ *CJE Micros*
◀ *£9.00 inc VAT £1.00 p&p*

When used with an external disc drive interface, the links in the external drive can stay set to '0', thus preventing problems when moving a drive from a BBC machine.
For Archimedes 305 and above

■ *Archimedes/BBC Monitor Switch*
▶ *CJE Micros*
◀ *£10.00 inc VAT & p&p*

This is for plugging both a 6502 BBC microcomputer and an Archimedes computer into an Archimedes colour monitor.

PERSONAL FINANCE AND HOBBIES

■ *Family History System*
▶ *Micro-Aid*
◀ *£24.95 inc VAT*

This is a program for those interested in genealogy. Over 6000 people can be entered with up to about 2500 marriages. Searches can be made and family listings as well as a complete family tree can be printed out. The suite includes a database, ordered list of people, together with many utilities of benefit to the genealogist.
For Archimedes 305 and above

■ *Ancestry*
▶ *Minerva Systems*
◀ *£69.95 inc VAT*

A system for genealogy in families or pedigree animals. Obviously the specification when used as a pedigree system is less complicated, but as a full genealogy package it allows user defined records to be entered on each person/animal, and any person/animal, and any person can have a relationship with any other person in the file.

The record card for each person is completely user definable and may contain areas for information of particular interest. Relationships include marriages to more than one partner with a variable number of offspring from each relationship.

Reporting packages included within the system allow family trees/pedigree chains to be printed on the paper as per the traditional paper layout, rather than a vertical listing as produced by other systems. Included in the package is a fully illustrated Royal Family tree of 19 generations, making it ideal for educational purposes.
For Archimedes 305 and above

■ *Bank Manager*
▶ *Contex Computing*
◀ *£25.00*

Bank Manager is a home and small business accounting package. Containing many facilities to allow complete control of up to 36 bank accounts (e.g., cheques, savings, credit cards, cash accounts, foreign currencies etc).

This program allows statements to be checked, remembers standing orders, 'posts' them on the correct day and will show a forward payment schedule to ensure your account need not become overdrawn. It breaks down expenditure and income over any of 99 headings and 12 periods per heading and will compare budgets against actual.

Also included are extensive enquiry facilities, reports to screen or printer, high level programmable report writer, password protection, over 12,000 transactions per diskette. Bank Manager can be installed on a hard disc and this provides facilities with automatic menus of multiple data sets.

It automatically rolls forward in time (no time consuming end of month routines or consolidation procedures) and stores transactions in date order within each account.
For Archimedes 305 and above

■ *Cares Disc – Compilation of four care programs*
▶ *Squirrel Software*
◀ *£34.95*
Cash Care

This package acknowledges the financial facilities available to most of us today, such as bank accounts, cashcards, credit cards, building society cheque book accounts, standing orders, etc. Budget forecasting is easily achieved.

Scrolling enables 40 different categories of expenditure to be listed, alongside 20 categories of income, in two separate accounts for twelve months each. Annual Summary includes a 3-dimensional bar chart which can be saved to produce a printout.

Password protection gives personal privacy. Only you can reload your datafile back into the program.
For Archimedes 305 and above

Building Society Care
This program will cater for the various conditions that govern the interest rate calculations of your Building Society savings account(s) on a day to day basis. You can know accurately how much interest you have earned to date, and check interest calculations.

VAT Care
This is a serious business tool which will produce all the figures for the quarterly VAT return. Capacity – it will produce two separate datafiles of up to a maximum of 240 sales invoices and 240 purchase invoices respectively, each month for the three month period with accurate totals to be entered directly into their designated boxes on the VAT return.

Auto-Mode – if an entry requires the VAT calculating all amounts will be automatically entered. VAT rate – set as required – Zero rated items catered for.

Investment Care Plus
Keeps track of all your Investment/ Unit Trust, Shares, etc., producing displays of purchase details and bid details for each one. Printouts of current holdings, sales this (tax) year and dividends received. Offer and Bid prices are easily entered and the true position of your portfolio displayed. 3 Dimensional bar charts of the performance of any holding.
For Archimedes 305 and above

■ *Budget*
▶ *Micro-Aid*
◀ *£7.99 inc VAT*
Budget is designed for weekly, fortnightly, monthly or three monthly incomes. The program is totally flexible for you to enter as many headings as you require. Recursive checking helps you to find out exactly what money goes where.
For Archimedes 305 and above

■ *Home Accounts*
▶ *Minerva Systems*
◀ *£280 inc VAT*
This program takes full advantage of the Acorn Window environment for the ultimate in user friendliness and compatibility with other applications. The program is aimed at persons wishing to control their home finances on all levels and allows the user to get the most from it whether they want a simple check on their bank statement or full control of multiple bank accounts including credit cards and building societies with graphic representations of expenditure/budgets and cashflow forecasts. The System automatically caters for all the usual requirements in home finance including automatic posting of standing orders, transfer of cash from one account to another, checking accounts against preset levels to warn of bank charges or overdraft, budgeting and cashflow forecasting, analysis of income and expenditure over large number of headings, and full printouts of all information when required. An important feature of this package is the simple yet powerful bank reconciliation facility which allows individual transactions to be marked as they appear on bank statements, thus quickly and easily checking the accuracy of your bank statement and high-lighting transactions which have not yet cleared. This powerful package has been designed primarily for use in the home but is also ideal for any situation where finances are controlled through bank accounts and is thus useful for many small clubs and businesses.
For Archimedes 305 and above

■ *TRACCS+*
▶ *Galesoft*
● *ARTR*
◀ *£15.00*
TRACCS+ has been designed as an accounting program which will cope with home and club or society accounts, as well as PTA and School Funds. TRACCS+ is menu driven and requires no special skills or complicated setting up. Full use is made of the function keys to allow fast data entry and editing. There is full error trapping and safe return to the main menu.

Features include: 8 accounts, 80 budgets, reconciliation facilities, searches, data sort, totals analysis, printout for audit purposes. Budget analysis and balance sheets are also included, as are the transfer of totals to new or existing files, disc management options and Epson/Epson compatible printer options.
For Archimedes 305 and above

■ *Typing Tutor*
▶ *Contex Computing*
◀ *£15.00*
This program teaches touch typing keyboard skills. 90 graded lessons graduate from the basic home keys to all alphabetical numeric and punctuation keys. The program includes: optional selection between a word scan line checking facility or 'exact match' mode, target WPM and percentage correct individually set for each lesson and may be revised as required, audio key click for positive key depression, on screen keyboard layout and highlighted keys to encourage trainee to watch the screen, and free format option for typing practice.

Complete on-screen instructions describe the basics of touch typing and allow many set up options to be selected from the menu screens. An ideal companion to any further educational class or for individual tuition at home.
Can be installed on hard disc.
For Archimedes 305 and above

■ *Mailing*
▶ *Micro-Aid*
◀ *£13.74 inc VAT*
Mailing is a BASIC program which allows about 2000 names and addresses to be stored in memory at a time which can be handled in any of the five following ways: Straight Listing, Search by part of name, Sort by surname, Sort by geographical area and Label printing on any size and layout of label. This is a program for use by club membership secretaries, schools and anywhere that an economical mailing program is required.
For Archimedes 305 and above

PRECISION DRAWING AND DESIGN

■ *Gate-Array Design and Teaching System*
▶ *Silcon Vision Ltd*
◀ *£89.95 inc VAT*

This Gate Array Design and Teaching System package provides an introductory course for silicon chip design with facilities for array design, cell design, on-line help and a tutorial on integrated circuit design.

The package is fully compatible with Super-Dump for high-quality hardcopy of designs on Epson compatible printers.
and executed from a hard disc or from Econet.
For Archimedes 305 and above

■ *Euclid*
▶ *ACE Computing*
◀ *£45.00 inc VAT and p&p*

Euclid is a three-dimensional 'object processor' system specially written for the Archimedes range. It is supplied as a relocatable module and a suite of programs written in BASIC.

This package consists of a module and a utility program, the latter written in BBC BASIC. The system has been designed to be fast and simple to use from BBC BASIC and/or ARM machine code.

A straightforward SYS statement, with a parameter block set up with the aid of the Module, is used to project the 3-D display. Features of the system include orthogonal or perspective projections, line or surface drawing, full hidden surface removal, simple lighting effects, instant scene and object transformations, intersecting and concave surface polygons (up to 256 sides).

The utility program allows interactive design of object libraries. It doubles up as a standard 'flight simulator', allowing you to fly around and manipulate your designs.
For Archimedes 305 and above

■ *Techsoft Designer*
▶ *Techsoft*
◀ *£235.00*

Techsoft Designer is a powerful computer-aided design (CAD) package suitable for both education and business. The ease of use of the system particularly in dealing with 'difficult geometry' and editing and deleting etc is one of its strongest features. This program will be the basis of a fully automatic CNC lathe post processor which will be available separately.
For Archimedes 305 and above

■ *AutoSketch*
▶ *Autodesk*
◀ *£79.00*

This is an entry-level CAD system offering a wide range of drawing and editing functions.

AutoSketch is a precision drawing tool for use with a mouse.

Lines, arcs, circles, polygons and curves are drawn automatically and you can add text of any size, draw in colours and use different line types. When scaling or sketching drawings the dimensions will change automatically.

This product can be installed on and executed from a hard disc.
For Archimedes 310 and above

■ *Lintrack Archimedes Demo Disc*
▶ *Linear Graphics*
◀ *£14.30*

This demonstration pack of the printed circuit board design software Lintrack, comes complete with a demonstration disc and the full Lintrack manual.
For Archimedes 305 and above

■ *Linsign*
▶ *Linear Graphics Ltd*
◀ *£40.00*

Linsign is a signwriting and poster creation package. Five character fonts can be used to design and edit page layouts on the screen, and independent art files overlaid.

Nameplates, labels, titles, notices, forms and documents can be produced in up to ten colours when output to a Plotmate A4SM or Plotmate A3M plotter on paper, overhead transparency film, card, or cloth.

Linsign is compatible with the Linfont font designing package from Linear Graphics.
For Archimedes 305 and above

■ *Linfont*
▶ *Linear Graphics Ltd*
◀ *£19.30*

Linfont is a font design package using a 100 x 255 grid with a resolution of 0.1mm. Features include: rubber-banding, zooming and curve drawing through defined points.

The Linfont disc carries two rotating fonts ready for use with Linsign 2. The first is an alpha-numeric font, the second a purely pictorial font with a wide variety of icons such as a tree, a van, computer equipment and blackboard.
For Archimedes 305 and above

■ *Plotmate*
▶ *Linear Graphics Ltd*
Archimedes Welcome Pack
◀ *£45.75*

Archimedes/Plotmate welcome disc and manual. Programs and utilities on the welcome disc allow:

- Charts and graphs for the creation of 2-D pie and bar charts.
- Texter – primarily a label generator.
- 3D Framework – for simultaneous viewing and editing from 4 angles.
- Example of 3D mathematical function
- Coastline map of Great Britain
- Character set reference chart

For Archimedes 305 and above

■ *Plotmate A4SM and Plotmate A3M Graphics Plotters*
▶ *Linear Graphics Ltd*
◀ *£640.00 (A3M), £500.00 (A4SM)*

Plotmate 'M' Graphics Plotters can be driven directly by BBC VDU graphics commands in BBC BASIC, Pascal, C, Fortran, and any high level language or machine code without the need to write driver software.

In addition, Plotmates A4SM and A3M can understand three other graphics languages: HP-GL, Graphtec WX4671 and Sweet-P particularly when the Archimedes is fitted with a PC Emulator.

A multi-function keypad provides 22 functions such as windowing, bordering and re-scaling and re-origining to be enabled independently of the host micro's software.
For Archimedes 305 and above

■ *Plotmate A4SM and A3M Multipen Plotter*
▶ *Linear Graphics Ltd*
◀ *£632.00 (A4SM), £72.00 (A3M)*

This is a 10-pen automatic pen change facility which can be ordered either factory fitted, i.e. Plotmate A4SM + MultiPen or Plotmate A3M + Multipen or as an upgrade kit, i.e. A4SM Multipen Upgrade Kit or A3M Multipen Upgrade Kit. The Plotmate A4SM and A3M are the single-pen models. The kits consist of a 10 pen pen-stall, a special pen-holder and 2 ROMs which fit inside the Plotmate. Fitting instructions are provided with the upgrade kits.
For Archimedes 305 and above

■ *Lintrack Archimedes*
▶ *Linear Graphics Ltd*
◀ *£160.00*

Lintrack is a printed circuit board design package that can output camera-ready artwork and 1:1 prototype artwork on the Plotmate A3M or A4SM Graphics Plotter. Prototype boards can be produced in house with the aid of a light box.

Features include zoom, screen viewing of four layers, a pre-designed library of layouts, the creation of macro, and a Component Identification Plot for subsequent silk-screening.

For Archimedes 305 and above

■ *Hershey Font Disc*
▶ *Linear Graphics Ltd*
◀ *£27.50*

This is a special Hershey Font Disc for Linsign offering nine character fonts: Sans Serif, Cursive Script, Roman, Italic, Old English, Gothic, Italian Gothic, Greek and Russian.

For Archimedes 305 and above

■ *Linsign Archimedes Pack*
▶ *Linear Graphics Ltd*
◀ *£80.00*

The Linsign, Linfont and the Hershey Font Disc can be purchased together in the Linsign Archimedes Pack.

For Archimedes 305 and above

■ *3D Graphics Development System*
▶ *Silcon Vision*
◀ *£19.95 inc VAT*

This 3D Graphical Development System is a CAD and animation system for wireframe models. The package consists of a design and animation disc, a database disc and manual.

Stand-alone animation facilities include a 30,000 pixels/sec line generator suitable for games and simulations.

For Archimedes 305 and above

■ *Quickchip*
▶ *Qudos Limited*
◀ *POA*

This package provides a complete solution for the design of single level metal gate array chips. Designs completed with Quickchip can be fabricated quickly and cheaply by Qudos using their in-house Electron Beam Lithography capability.

For Archimedes 440 only

■ *3D Graphics Development System*
▶ *Silcon Vision Ltd*
◀ *£19.95*

This is a complete 3D design and animation system package for wireframe objects. It provides an editor, sweep generator for surfaces of revolution, macro facility and an applications option for animating designs from your own programs. It is compatible with the Plotmate plotter and Silicon Vision's Super-Dump printer driver for high quality hardcopy.

This product can be installed on and executed from a hard disc or from Econet.

For Archimedes 305 and above

■ *Super-Dump*
▶ *Silcon Vision Ltd*
◀ *£24.95 inc VAT*

This package provides 1920 x 1024 resolution hardcopy on ordinary Epson compatible printers. At 240 dots/inch it produces near laser printer quality. Images can also be scaled, positioned and previewed before printing. It is fully compatible with Silicon Vision's Realtime Solids Modeller, 3D Graphics Development System and Gate Array Design and Teaching System.

This product can be installed on and executed from a hard disc or from Econet.

For Archimedes 305 and above

■ *Realtime Solids Modeller*
▶ *Silicon Vision inc VAT*
◀ *£89.95 inc VAT*

This 3D solids/wireframe package is for architectural, interior and engineering design, teaching CDT and 3D geometry, molecular modelling, mathematical plots, scientific processing and 3D animation.

Hidden surface removal can be performed for full-colour solid displays which can then be incorporated in other art designs.

The Solids Realtime Graphic Language (RGL) ROM provides 52 commands to write your own 3D applications.

It is compatible with HP-GL, Plotmate and Graphtec plotters. It can also be used with 'Super Dump' for high quality hardcopy on Epson compatible printers. This product can be installed on and executed from a hard disc and from Econet.

For Archimedes 305 and above

■ *Minichip*
▶ *Qudos Limited*
◀ *£500.00*

Minichip provides an educational system for the design of single-level, metal bi-polar arrays. Designs completed with Minichip can be fabricated quickly and cheaply by Qudos using Electron Beam Lithography. (Educational use only.)

This package can be installed on and executed from a hard disc and from Econet.

For Archimedes 305 and above

■ *ARC-PCB*
▶ *Silicon Vision Ltd*
◀ *£195.00 inc VAT*

This is a powerful PCB design system package with fully automatic routing, rats nesting, surface mount capability, 0.001 inch resolution, 32 inch x 32 inch max board size, on-line help, fast zoom pan and redraw. Test and silkscreen are also included with variable line, pad, text and grid sizes, part libraries, block move, copy, rotate, mirror and delete option. It supports Plotmate, Graphtec and all HP-GL compatible plotters. It also includes a high resolution (1920 x 1024) hard copy facility for ordinary Epson compatible printers.

This product can be installed on and executed from a hard disc or from Econet.

For Archimedes 305 and above

■ *Parametric Design Tool*
▶ *Oak Professional Software*
◀ *£295.00*

The Oak Parametric Design Tool (PDT) is a 'state of the art' CAD package designed to fully exploit the graphics power and high processing speed of the Archimedes computers.

PDT represents a major advance in CAD technology, and is the world's first fully interactive, fully parametric 2D CAD package. Where traditional CAD systems store the co-ordinates of end points of lines, centres of circles etc, PDT stores the relationships between the various entities within the drawing, e.g. if a line was defined as being tangential to two circles, and subsequently one of the circles was moved or had its diameter changed, PDT would automatically move the line so that it remained tangential to both circles. On a co-ordinate based CAD system, the line would remain in its original position.

The user may zoom out and pan around the drawing with any practical magnification. Up to 10 view points may be stored and instantly recalled.

For Archimedes 310 and above

SOUND AND MUSIC

■ *EMR Arpeggio Music System*
▶ *Electromusic Research Limited*
◀ *£29.95*

This system offers a range of programs from 'fun-painting music packages' to full-blown studio programs with SMPTE and virtually unlimited track recording.
For Archimedes 305 and above

■ *MIDI Expansion Card*
▶ *Acorn Computers*
● *AKA16*
◀ *£69.00*

MIDI is the acronym for Musical Instrument Digital Interface. By installing the MIDI interface in your Archimedes and connecting a music keyboard, you can use the computer as a musical instrument. The sound can be made by the speaker on the computer, or you can plug in headphones, or your hi-fi system.

The Archimedes can also be used to extend the capabilities of the instruments you have, provided they have MIDI installed. By writing or buying application programs much more becomes possible, and you can write these using the high speed BASIC V on the Archimedes computer.

The ROM expansion card is easily installed in any Archimedes computer. Full instructions are provided in the pack. NB Archimedes 300 series require a backplane (AKA01) to be fitted.

■ *MIDI Add-on to I/O Expansion Card*
▶ *Acorn Computers*
● *AKA15*
◀ *£39.00*

This is an upgrade to the I/O expansion card (see page 9), contained within the I/O card's double width. The MIDI standard interface is supported. Its specifications are similar to the MIDI expansion card (above) with the exception that the performance of the MIDI Add-on is limited in that you cannot play and use your Archimedes system as a controller at the same time.
For Archimedes 305 and above

■ *MIDI Interface Unit*
▶ *Electromusic Research Ltd*
◀ *£69.00 + p&p*

This package is a full range of MIDI interfaces including professional expansion cards with SMPTE and unlimited MIDI channels.
For Archimedes 305 and above

■ *EMR Arpeggio Soundsynth*
▶ *Electromusic Research Ltd*
◀ *£49.95 + p&p*

This product allows unique voice creation via wave tables in numerous ways. It links to sample expansion cards as well as being able to produce sounds for use with EMR systems.
For Archimedes 305 and above

■ *EMR Arpeggio Studio 24 Plus*
▶ *Electromusic Research Limited*
◀ *£99.00 + p&p*

This package is a complete recording system: a stand-alone program within the EMR Arpeggio Music System.
For Archimedes 305 and above

■ *A448 Sound sampler MIDI Card*
▶ *Armadillo Systems*
◀ *£125.00 MIDI Upgrade £35.00*

This is an expansion card with 2 x 8 bit audio channels and an optional MIDI in/out, through port. The sample rate is 41 Khz which is line or microphone selectable. The sampling software package is also supplied.

This product can be installed and executed from a hard disc. An expansion card is essential.
For Archimedes 305 and above

■ *Fourier Analysis*
▶ *Armadillo Systems*
◀ *£40.00*

This Fourier analysis/resynthesis package includes spectral editing and customer filter responses. The transform module performs a 256 point FTT in 10ms. It is supplied with a harmonics editing and 3-D display package, which allows any filter functions to be applied to a waveform. Applications include: Fourier synthesis, real time note recognition and real time spectrographics. Supplied with full documentation.

This product can be installed on and executed from a hard disc.
For Archimedes 305 and above

■ *Sibelius 7 Music Processor*
▶ *Genesis Ltd*
◀ *TBA*

This package allows composers, publishers, copyists and educational establishments to produce high quality, laser-printed music. All standard traditional and contemporary notation is incorporated, including text in various sizes and fonts. Any type or number of instruments may be used, with automatic orchestral part extraction and transposition. The score is edited on-screen, and is automatically spaced according to traditional rules of music engraving. Depending on the RAM present, between 200 and 1700 full-score pages of any shape can be edited at once and the end result may be produced by a PostScript laser printer.

It is hoped that at the time of going to press this package will be available. It can be installed on and executed from a hard disc or from Econet.
For Archimedes 305 and above

■ *Teaching with a Micro: Music 1*
▶ *The Shell Centre, University of Nottingham*
◀ *£15 inc VAT and UK postage*

The Music 1 package comprises COMPOSE, a program that allows you to compose tunes easily and quickly. It is suitable for all ages and ability levels. Children with no previous musical experience find themselves almost immediately writing music. At the same time experienced musicians will also find it useful.
For Archimedes 305 and above

SPECIFIC MARKETS

■ *Farmcash*
▶ *Dixon and Dixon*
● *SNX405/ABC*
◀ *£200.00 + VAT inc U.K. p&p*

This is a fully integrated professional account program specifically for farmers. It allows fast set-up of accounts from the "Enterprise Database" with automatic budgets, audit trail, graphic cashflow monitor, archived accounts. Traders and transactions are also included, with current bank reconciliation and VAT.
For Archimedes 305 and above

■ *Bakery*
▶ *Trafford Computing*
◀ *£79.50*

This is a suite of programs to assist in the running of a bakery producing bread and confectionery items. Input is the quantity of each item required for the following day and output gives exact quantities of all required ingredients; totals of all items to be produced; roundsman's lists; invoices at the end of week and quantities of materials used.
For Archimedes

■ *Video Rental*
▶ *Minerva Systems*
◀ *£69.96 inc VAT*

Video Rental has been designed to relieve shop staff of many of the time-consuming tasks involved in the day to day running of a video library. Furthermore, it incorporates many features which are intended to provide the manager with up to date reports to assist in the efficient operating of the video shop. You may select to have automatic analysis of the types of videos hired, total hires and total revenue.

The system is menu driven and automatically relates the video and customer files so that a transaction performed in the customer file will update the video file. Video reports include analysis of price lists by classification or certificate, overdue videos, worn tapes, revenue of tapes, suggested purchases (i.e. enquired tapes).

Customer reports include overdue videos for each customer, customer fines and revenues, customers who joined before a specified date, customers who have not hired a video since a specificed date, etc.

■ *Profiler*
▶ *Wyre CNC Systems Ltd*
◀ *£1000.00 inc VAT, training and installation*

Profiler is designed to aid production engineers in writing CNC part programs, by eliminating the need to calculate tool paths for complex shapes.

The system uses simple geometry commands and interactive graphics for Computer Aided Part Programming (CAP), of CNC milling machines and lathes with Fanuc, Anilam, Bosch and Heidenhain industrial CNC controllers. Also included are full edit facilities and a DNC communications package for downloading part programs to the CNC controller or paper tape punch.

Profiler is also suitable for students on CAE courses in Further and Higher Education.
For Archimedes 305 and above

■ *G-Coder*
▶ *Wyre CNC Systems Ltd*
◀ *£250.00 inc VAT, training and installation*

G-Coder is an 'offline' CNC Part Programming package with comprehensive editing capability. Part programs are stored on disc and a DNC link is provided for direct downloading of CNC programs to the machine tool, eliminating the need for paper tape or cassettes.

G-Coder is available for many industrial CNC controls and paper tape punches including Fanuc, Anilam, Bosch and Heidenhain, or can be tailored to the user's individual requirements.
For Archimedes 305 and above

■ *Fieldfile and Farmplanner*
▶ *Dixon and Dixon*
◀ *Fieldfile plus Farmplanner £330 or separately Fieldfile £150. Farmplanner £180.*

Using these packages with Farmcash, financial and physical records are integrated and used for planning future policy, as well as normal accounting reports. Each package can be used independently if required.
(These two packages together with Farmcash can be bought for £500.)
For Archimedes 305 and above

■ *Milkman*
▶ *Dixon and Dixon*
◀ *£300.00 (including 6 months' support)*

This package can handle 1500 customers on one disc drive. Facilities included are: weekly or fortnightly, fully detailed, printed receipts; standing orders; variations; individual pricing; holidays and daily requirements.
For Archimedes 305 and above

SPREADSHEETS AND STATISTICS

■ *Logistix*
▶ *Acornsoft*
● *SKB20*
◀ *£99.00*

Logistix is a comprehensive business planning and analysis program. It combines time and resource management with state-of-the-art spreadsheet functions. Logistix gives you the four key functions of:

Spreadsheet calculations for numeric projections and analysis; timesheet planning for assigning resources to tasks over time; graphic presentation for communication and trend analysis; and database management for storing and retrieving information.

Output from Logistix includes compressed modes and SIDEWAYS printing; 150 context sensitive HELP screens; Consolidation and 'What-If' functions and multiple currency and date formats etc.

There is a 'Computerised Wall Planner' with extensive graph types and options.

For Archimedes 310 and above

■ *WASP*
▶ *The Fruit Factory*

Wasp is a complete statistical package, offering full regression and ANOVA. Features includes: WIMP environment, regression (polynomial, weighted, etc.), transformation of variables; generation of residuals etc; creation of statistical tables, genuine 3D plots (with real time rotation and data selection); non parametric tests; interactive and batch processing modes; large data sets; and advanced output procedures.

For Archimedes 305 and above

■ *The XOB Statistics Package*
▶ *XOB*
◀ *£31.20 (£49.20 if used on a network).*

The XOB Statistics Package permits parametric and non-parametric analysis of numerical data with the following methods:

- Descriptive statistics using arithmetic mean, mode, median, semi-interquartile range, variance and standard deviation.
- Parametric and non-parametric correlation tests
- 't' test for both correlated and independent samples.
- Non-parametric equivalents of the 't' test, the Mann-Whitney 'U' and the Wilcoxen test.

Even the Kappa statistic is available.

The software includes a data-editor and the tests may be used on data samples up to the limits of the chosen filing system.

Versions are available for both disc and Econet systems.

For Archimedes 305 and above

■ *GammaPlot*
▶ *Minerva Systems*
◀ *£69.95 inc VAT*

This is an extensive general, Graphics package allowing anyone to produce graphics and charts for business, scientific, educational or simply home interest, with the following features:

- Multiple charts plotted on screen at any one time
- Graphs/Charts may be positioned anywhere on screen
- Wide range of chart types
- Pie charts with highlighted segments, percentages, values or with labels, etc.
- Scatter or line charts with line of best fit
- Histograms and three dimensional histograms
- Text boxes etc. may be placed anywhere on screen
- Fonts may be changed for scales/labels and comments on the charts
- Various screen modes or colours may be chosen including patterns
- Each chart/graph size may be changed at any time
- More than one graph may be plotted on the same axis and they may even completely overlay each other if desired
- Screens may be output to the disc or printer for hard copy or slide shows
- On-Screen editor for text presentation
- Data entry may be via the keyboard or any Delta, Gamma or Sigma file or imported from Inter-Sheet General ASCII
- Statistics include line of best fit, Standard Deviation, Minimum, Maximum, Correlation coefficient, etc.

For Archimedes 305 and above

■ *WASP – Professional*
▶ *The Fruit Factory*

This is a package which offers advanced statistical methods, as well as all the features of WASP.

Additional capabilities include: advanced non-parametric tests; simulation studies by Monte Carlo sampling; high level ANOVA designs; advanced data exploration techniques and many other options.

For Archimedes 305 and above

■ *SigmaSheet*
▶ *Minerva Systems*
◀ *£69.95*

This spreadsheet package provides the following features:

- sheet size of 1000 columns by 16000 rows
- Makes full use of memory available to take advantage of larger machines
- Full maths facilities include SIN COS MAX MIN SUM AVERAGE+−*/
- Save/Load/Print parts of sheet
- Definable colours, spacing, characters, column widths, etc.
- Cell formatting for Left, right, centre and a number of decimal places
- Cell references may be names for ease of use eg 'Jan-Sales' rather than 'B27'
- Automatic relative or absolute reference adjustment while replicating
- Makes use of Maths C-processor if fitted
- Imports files from System Delta, ViewSheet, Inter-Sheet, Lotus 123 and Symphony, etc.
- Exports data to System Gamma range

For Archimedes 305 and above

■ *FIRST*
▶ *Serious Statistical Software*
◀ *£150.00*

This is a completely integrated statistical package. FIRST provides techniques ranging from elementary to post-graduate and industrial research levels, as well as features valuable in teaching. Designed to encourage data critique, not merely analysis, FIRST is interactive, and fast. Comprehensive data management and transform facilities complement its statistical features, which include: univariate statistics, T-tests, correlations, unrivalled multiple regression analysis, advanced regression diagnostics, robust regression, principal components, and non-linear least squares etc.

This software can be installed on and executed from a hard disc.

For Archimedes 305 and above

■ *WEIBULL*
▶ *Serious Statistical Software*
◀ *£300.00*

This is specialised software for estimation of parameters of Weibull – distributed data. It provides traditional graphical method with plot of data and least squares fit to graph. Main features are maximum likelihood methods with unbiasing of estimates, and computation of interval estimates of parameters. 'Sudden Death' experiment designs are also provided for.

For Archimedes 305 and above

SCHOOL ADMINISTRATION

■ *School Administrator*
▶ *Minerva Systems*
◀ *£79.95 inc VAT*

This package has been designed to cover most of the daily needs in schools and colleges including the submission of examination entries.

The system will store the pupil records from first to sixth years with sufficient capacity to satisfy the requirements of every size of school. It provides rapid information regarding any pupil or examination and will produce numerous reports to include examination entries and individual timetables. Internal examinations may also be entered. Fourth form pupils may provisionally book on for an exam without specifying which board.

The staff file gives access to staff details and also links in with the class records. Statistical data may be produced to assist with the completion of the DES Form 7.

Additional fields of information may be added to the pupil or staff files.

Extensive reporting facilities include form, house, year, sex or entire school lists, all candidates for any particular exam, staff lists, individual exam timetables, exam lists to suit Examination Boards specifications including GCSE, total school exam costs and bills for fee paying pupils, and statistics for DES Form 7.

For Archimedes 305 and above

■ *Maxi-Pupil Profile Database*
▶ *Syntax Software*
◀ *£12.95*

This is an easy to use Profiling Database featuring word processor type data input routines and records on up to 20 separate databases for creating a macro database system. Profile comment is available up to 5 lines length (stored in the user function keys for automatic entry on to pupil records). Extensive comment libraries can be stored on disc. All the usual database functions are available (search + replace etc) plus letter and report creation with automatic insertion of any record data (mailshots).

A three hour instructional video is also available.

For Archimedes 305 and above

■ *PE-Admin + Maxi-Pupil Profile Database*
▶ *Syntax Software*
◀ *£39.50*

This package enables you to computerise all the administrative tasks needed to run a Physical Education department. It includes alpha and rank order sorts of any measurable event, 5* award scheme, team lists for any sport, fixtures and results, automatic scoresheets for swimming/athletics and cross-country events, stock control, flexible data storage and retrieval – an invaluable tool for the impending implementation of Profiling.

The Maxi-Pupil Profile Database is included in the PE-Admin system but is also available as a stand alone system.

A three hour instructional video is also available.

For Archimedes 305 and above

■ *Maxi Record Management Utilities Disc*
▶ *Syntax Software*
◀ *£5.95*

This new package is a record management utility that allows rank order or alphabetical sorts of records around alphanumerical data in the record fields. Record management consists of add, delete, copy, move, swap records. Modification of pre-designed screen formats (fields and labels) can be made without loss of the previously created data.

For Archimedes 305 and above

■ *Micro Librarian Professional*
▶ *Micro Librarian*
◀ *£300.00*

This library management software can greatly increase efficiency. Computerising a library gives the librarian a greater level of control over overdue books, fines and stock ordering. The researcher can also have total access to the shelves without thumbing through a card index. It will automatically keep statistical records. This product requires the use of a hard disc.

For Archimedes 305 and above

■ *Library Dewey Classification*
▶ *Aztec Software*
● *RM11*
◀ *£9.50 inc VAT+p&p*

This has been specially written for the school library. Students type in the topic they are looking for and the computer reports back the Dewey Number and up to 40 more characters of information eg: videos available etc. Listing is easy and much more information has been added to the 750 topics already listed.

It can be installed on and executed from a hard disc and Econet, and has multi-user capability.

For Archimedes 305 and above

■ *Profiles*
▶ *Trafford Computing*
◀ *£29.50*

This is used in schools for the preparation and printing of pupil profiles and reports. Quantifiable attributes or measures of performance are displayed and printed as a bar chart. The commentary is created from a set of standard comments stored on disc with the addition of conjunctives such as 'and', 'but', etc. The report is generated in a word processing environment. Reports can be printed at any time.

For Archimedes 305 and above

■ *Administrator's Friend*
▶ *Educational Administration Software*
◀ *£40.00*

This is a school administration integrated modular package. Options: timetabling/exam entry/exam results/ pupil-database and report generator.

For Archimedes 305 and above

■ *Multi-Test Designer*
▶ *Syntax Software*
◀ *£19.95*

The Multi-Test Designer is a flexible system which has applications in health related fitness tests, educational non-verbal battery tests and spreadsheet-like mark or score manipulation and analysis. For the above tests, raw scores always need to be converted to statistical scores; the system's basic function is to do this automatically for any test from any source. After an initial set-up routine, a particular test is then permanently computerised. (Compatible with name files created in PE-Admin).

An instructional video is also available.

For Archimedes 305 and above

EDUCATION CURRICULUM AREAS

Biology

■ *CIC Animal Physiology Pack*
▶ *Longman Group UK Ltd*
◀ *£37.50*

This pack has four parts.

The first is Blood Sugar. This is a model to demonstrate the relationships between the various factors affecting the level of glucose in the blood of a human to illustrate the principles of the homeostatis.

Age range 14 – 19 years

The second, Countercurrent Systems, is a set of simple models of a heat exchanger and a countercurrent multiplier.

Age range 16 – 19 years

Diet Analysis is the third part. This is a breakdown of the calorie, protein, fat, carbohydrate, vitamin and mineral content in meals selected by the student.

Age range 13 – 16 years

This last part, Human Energy Expenditure, calculates the energy required for different activities and the energy obtained from different foods, and considers the energy used and gained over certain periods of time.

Age range 13 – 16 years

For Archimedes 305 and above

■ *CIC Biochemistry and Plant Physiology Pack 1*
▶ *Longman Group UK Ltd*
◀ *£37.50*
Individual price: £18.50

This pack includes "Flowering in Soya Bean" and "Limiting Factors in Photosynthesis".

Flowering in Soya Bean provides a study of the factors affecting flower initiation and the control of flowering by endogenous rhythms. It does this by allowing students to plan and carry out series of experiments under controlled conditions.

Age range 16 – 19 years

Limiting Factors in Photosynthesis demonstrates how the rate of photosynthesis may be limited by one or more factors and allows students to plan and carry out investigations using a wider range of parameters and is controlled with greater precision than is otherwise possible in a school laboratory.

Age range 14 – 19 years

For Archimedes 305 and above

■ *Biology Class Experiments: Food Energy and Water Content/ Hearing Age*
▶ *AVP Computing*
● *COM 109*
◀ *£24.50*

This is a package of three programs to complement practical work.

The food energy program provides a graphic review of the simple experiment to find the food energy of different foods. After doing the experiment up to ten sets of data may be entered, and calculations are performed to produce food energy in total and per gram. Results are then compared, displayed in table form or on a block graph and the table format may also be printed.

The experiments to find water content of food and hearing age of individuals are treated in a similar way enabling data collection and entry, calcualtion and comparison of results presented in table or block diagrams with the option to print.

A suitable version is required if this is to be installed on and executed from a hard disc or from Econet.

A site licence is required.

For Archimedes 305 and above

■ *Human Anatomy: The Heart and Digestive System*
▶ *AVP Computing*
● *COM 48*
◀ *£24.50*

By using annotated diagrams and testing sections this collection of programs is useful for teaching and revising work on the heart and digestive system. With the main program on the digestive system the operator works at his own pace building up a diagram on the screen and studying the functions and processes occurring at each stage.

The testing section incorporates interesting animated graphics and the times as well as the scores are given. In all programs the user's results are displayed in tabular form to enable comparisons.

A suitable version is required if this is to be installed on and executed from a hard disc or from Econet.

A site licence is required.

For Archimedes 305 and above

■ *CIC Heredity Pack*
▶ *Longman Group UK Ltd*
◀ *£37.50*
Individual price: £18.50

This pack includes: Inheritance, Multifactorial Inheritance, and Statistics for Biologists.

Inheritance is a program of breeding investigations in *Drosophila melanogaster*, mice, humans and tomato plants for an introduction to the study of genetics.

Age range 14 – 16 years

Multifactorial Inheritance is a model to investigate continuous variation in a hypothetical organism. It models the effect of up to ten genes, each with two alleles, on the size of the organism.

Age range 16 – 19 years

Statistics for Biologists is a collection of simple utility programs to aid the handling of biological data. Calculates mean, standard deviation, t and correlation coefficient r. It also carries out the chi-squared test.

Age range 16 – 19 years

For Archimedes 305 and above

■ *CIC Biochemistry and Plant Physiology Pack 2*
▶ *Longman Group UK Ltd*
◀ *£37.50*
Individual price: £18.50

The first part of the pack "Metabolic Pathways", simulates the experimental determination of a metabolic pathway, through growth experiments with various mutant strains of the bacterium, *Salmonella typhimurium*, which have a metabolic block in a pathway that the parent strain can carry through to the end product.

Age range 16 – 19 years

"Transpiration" is also included. This models the effects of the environment on water loss from plants.

Age range 14 – 19 years

For Archimedes 305 and above

■ *CIC Ecology Pack*
▶ *Longman Group UK Ltd*
◀ *£37.50*
Individual price £18.50

This pack has four parts.

Biomass

This assists in the understanding of the production of biomass by a secondary producer and demonstrates how man can affect the yield and maximise the return for a given resource. The program models a freshwater reservoir which can be stocked with trout from fry to adults and allows students to 'observe' the population over many years with or without interference by man.

Age range 14 – 19 years

For Archimedes 305 and above

Pond Ecology

This gives students a greater understanding of the delicate balance which exists in an ecosystem by modelling the effects of fishing and pollution on numbers of phytoplankton, herbivores and fish in a freshwater community.

Age range 13 – 16 years

Predator-Prey Relationships

This gives students an understanding of the nature of an ecosystem by studying one of its principal features – the interactions between predators and their prey.

Age range 16 – 19 years

Statistics for Biologists

This is a collection of simple utility programs to aid the handling of biological data. It calculates mean, standard deviation, t and correlation coefficient r. It also carries out the chi-squared test.

Age range 13 – 16 years

Business Studies

■ *Stock Control Simulation*
▶ *Scetlander*
◀ *£14.00*

Commerce and industry now routinely use computers to control stock. This simulation gives pupils the opportunity to run a company for up to 120 computer days. The program has three objectives:

1. to emphasise the importance of the computer in helping industry to set up proper re-order levels, to choose reliable suppliers and to link the whole stock control process to production;
2. to illustrate a simple stock control situation with associated graphs, tables and charts;
3. to highlight the difference between manual and computer controlled re-ordering of stock.

This software can be installed and executed from a hard disc and from Econet.

For Archimedes 305 and above

■ *NEA Case Study*
▶ *RESOURCE*
◀ *£14.95*

This pack consists of a disc, teacher's booklet and student materials simulating the 'North East Area Cleaning Consultants'. The software covers all of the points for the Northern Examining Association 1988 case study including personnel files, payroll slips, training, holidays etc.

The student materials give some simple tasks so that these areas can be explored in an interesting way.

For Archimedes 305 and above

■ *Leisure Unlimited*
▶ *RESOURCE*
◀ *£18.95*

Leisure Unlimited is a simulation packaged based on a mail order company supplying leisure goods. It is designed to familiarise users with a business data processing system and to illustrate that hard-to-understand parts of a computing syllabus can be taught in a more effective way through practical work.

It will also prove a useful resource in Information technology and Business Studies courses. The computer is portrayed as a business tool and as part of an integrated system, to promote problem solving activities and to encourage a systems approach to the teaching of computers.

The simulated company employs a minimum of 17 staff, organised into 5 main departments; sales, accounts, warehouse, computer operations, customer services, and the pack contains software plus a complete set of documents required to run the system.

For Archimedes 305 and above

■ *Datafile*
▶ *Scetlander*
◀ *£16.50*

This package is an introduction to the use of databases, their construction, operation and applications. This flexible program allows pupils to create various files and to build databases on chosen subjects. Practical experience is gained by entering, adding, amending and deleting data. Files can be accessed for stored information. This process leads to a better appreciation of the way such systems operate.

Of use in primary classroom projects, Datafile also has a valuable place in secondary schools to teach business applications of databases, e.g., personnel records, statistics, PAYE records etc.

The greater capacity of the Archimedes computer means a larger number of files can be stored.

This package can be installed on and executed from a hard disc and from Econet.

For Archimedes 305 and above

■ *Crossword Call Up*
▶ *Northern Micromedia*
◀ *£11.00+p&p*

Crossword Call Up is a program which creates crosswords that can be used on screen and/or printed out.

The program has been designed around a small database which is used to hold clues and answers. Each clue can be linked to subjects and inbuilt levels (i.e., the subject could be Transport and the level could be Easy, Medium or Hard) and the program will then create a crossword specific to your subject, level and the number of words you want in your crossword.

An answer sheet can be printed below the crossword if requested plus the number of copies can be specified.

Being entirely content-free this program can be used by children of all ages and abilities and can be linked to all curriculum areas.

For Archimedes 305 and above

■ *Catch*
▶ *Scetlander*
◀ *£19.00*

A simple but effective business game, this program helps to develop decision-making whilst increasing knowledge of the fishing industry.

A fishing port is the scene of the project and pupil groups adopt the roles of crew members aboard a Seine-netter. Pupils are supplied with background information and a log book. They also have use of a 'radio' to 'hear' weather forecasts and fish prices. Excellent graphics show weather, soundings of the ocean, size of catch and duration of trip. Pupils must interpret the on-screen sounder to catch fish. A teacher's section provides control of the weather which pupils face.

Decisions made by the 'crew' are reflected in the operating profits or losses shown on the 'End of Trip' statement sheet. Analysis of the costs incurred and the income gained by fish sales are provided in a 'Balance Sheet'. This can lead to discussion on the real life problems facing small businesses.

This product can be installed on and executed from a hard disc and from Econet.

For Archimedes 305 and above

■ *Holiday*
▶ *Scetlander*
◀ *£16.50*

This realistic simulation of a 'travel agent' – type booking system provides considerable scope for different types of work. A schematic with suggestions is included in the package which also features a specially produced holiday brochure.

The program has three sections: Hotel information related to the brochure; and a Booking service which can be used in either customer or agent mode.

The completed holiday can be costed and printed out.

An extensive teacher's section allows prices to be updated, bookings to be saved and the information service to be switched off.

This software can be installed on and executed from a hard disc and from Econet.

For Archimedes 305 and above

■ *Car Hire*
▶ *Scetlander*
◀ *£16.50*

This pack is most effective in the development of skills in I.T., Computer and Business studies, this simulation of a small computerised car-hire firm requires the pupil to receive and make bookings according to each customer's needs. Bookings are communicated by telephone calls built into the program.

The main skills involve reading for information and decision-making. An overlay is supplied for the function keys which control the electronic 'booking form' . The pupils can 'run' the firm for up to four weeks with statements being printed out at the end of each week. These statements can be saved so that the pupil can resume at another time.

A teacher's section allows control of the bookings and costs.

This product can be installed on and executed from a hard disc and from Econet.

For Archimedes 305 and above

Careers

■ *Work Experience Administration Package*
▶ *Careersoft*
● *WEA3.5*
◀ *£29.50*

Centred around individual 'placements', this program also contains a database of contacts with addresses and a word-processor with mail-merge. It produces numerous useful lists and makes it easy to send 'personalised' letters to key people. This software can be installed and executed from a hard disc.

For Archimedes 305 and above

■ *Enterprise/Business Plan Processor*
▶ *Careersoft*
● *BPA3.5*
◀ *£29.50*

This package is designed to enable students to produce a professional business plan (with cashflow forecast) for their enterprise/mini company etc. The software can be installed on, and executed from a hard disc, and from Econet.

For Archimedes 305 and above

■ *Moving on*
▶ *Careersoft*
● *MOA3.5*
◀ *£19.50*

This is a set of programs useful for those with little experience of using computers; the four sections being: Jobs and You, Letters of Application, Application Forms and Telephoning, and Interviews.

Each section consists of a computer program, information/worksheets on disc and a series of activities. This package can be installed and executed from a hard disc or from Econet.

For Archimedes 305 and above

■ COCA
▶ *Careers and Occupational Information Centre (COIC)*
● CS46
◀ £22.00

COCA is a simple database which can be used for a variety of purposes, one example being a local database of careers information. Once set up as a careers database the program can be worked through by individual students who will then be able to get a printout of suggested career options. A small careers database is included with the creator program. This program could be useful in almost any area of the curriculum.

2 DISCS

For Archimedes 305 and above

■ *Computavisit*
▶ *Careers and Occupational Information Centre (COIC)*
● CS47
◀ £21.00

This simulates visits to industrial or commercial premises, and has a creator facility which allows users to 'create' their own visits.

For Archimedes 305 and above

■ *Hotel*
▶ *Careers and Occupational Information Centre (COIC)*
◀ £17.50

There's only one way to learn about business – by experience. This pack gives the user a chance to experience the pitfalls of commercial management like problems of staff morale and customer satisfaction. Users take the role of the hotel manager, with the size and location of hotel varying according to choices made at the beginning of the game. The level of difficulty and factors like inflation and seasonal fluctuations are also determined at the outset.

For Archimedes 305 and above

■ *Micro-Life*
▶ *Careers and Occupational Information Centre (COIC)*
● CS48
◀ £23.00

Micro-Life is a game that is used to process views of life. What would happen if you spent all your free time studying? Would you pass your exams with flying colours or would you break down through overwork and stress? What effect would your own choice have on getting a job, becoming independant, your security or happiness? These questions were posed by our fifth form test group and appear as part of the three sets of sample data which cover 5th form views, work experience and how to use the system. Micro-Life? is an open-ended program that can be used to focus discussion on any area. Groups program their own questions into the computer and weight the answer choices according to their philosophy of life. Ideal for life and social studies.

2 DISCS.

For Archimedes 305 and above

■ *Production Line*
▶ *Careers and Occupational Information Centre (COIC)*
● NM07
◀ £25.00

Production Line aims to promote understanding of the processes and decision making involved in making things in a commercial environment. Although the program uses the clothing industry as an example, the basic concepts of design, marketing and production, and the skills demanded in them are applicable in the manufacture of many types of mass-produced goods. The program allows the user to design clothes on screens and to staff and control a production line in real time.

1 DISC.

For Archimedes 305 and above

■ *Resolve*
▶ *Careers and Occupational Information Centre (COIC)*
● CS37
◀ £49.00

Resolve is a program suitable for all age groups right across the curriculum and Resolve has as much limitations as the bounds of the user's imagination. Essentially it is an aid to decision making – what type of decision is left completely to the user's discretion, since the structure of the program remains the same while the information which can be entered is infinitely variable.

Resolve was developed by the London School of Economics, and has uses in any context where choices need to be made. It can be used by one person alone or as an excellent opportunity for class discussion. Everyone who buys a copy of Resolve will also get a User supplementary guide, giving examples of ways the program can be used in different situations. The Guide is a very useful addition to the program and comes free!

For Archimedes 305 and above

■ *Supermarket*
▶ *Careers and Occupational Information Centre (COIC)*
● NM06
◀ £17.50

Supermarket has been devised to help young people explore the problems of managing a retail store. Once involved the program user needs to develop skill and foresight and a cool head for business to achieve the aim of making a profit in six weeks of trading, thus ensuring that the store survives to trade again.

For beginners the program has a trainee mode where advice is given, and for real experts the professional mode gives no help and even speeds up the action in certain sections.

For Archimedes 305 and above

Chemistry

■ *CIC Physical Chemistry Pack*
▶ *Longman Group UK Ltd*
◀ £34.95

This pack includes the following:

- Rates of Reaction
  This program concerns the effect of reaction conditions, inluding particle size of catalyst, on the rate of decomposition of hydrogen peroxide.
  Age range: 14 – 19 years
- Gas Laws
  This helps understanding of these difficult concepts by providing graphical displays demonstrating the relationship between volume, temperature, pressure and mass of an ideal gas.
  Age range: 13 -16 years
- Homogeneous Equilibrium
  This is an investigation of acid-alcohol equilibrium and some gas phase equilibria leading to an equilibrium law in terms of concentration.
  Age range: 16 – 19 years

For Archimedes 305 and above

■ *CIC Industrial Chemistry Pack*
▶ *Longman Group UK Ltd*
◀ £27.50
Individual Price: £18.50 + VAT

This pack includes: "The Manufacture of Sulphuric Acid" and "Siting an Aluminium Plant".

- The Manufacture of Sulphuric Acid is an investigation into aspects of a chemical industrial process. The conflicting demands of best equilibrium yield, high daily production and profitable manufacture are demonstrated.
  Age range: 13 – 18 years

- Siting an Aluminium Plant enables students to consider some of the factors which must be considered when planning the siting and production targets of an aluminium smelting plant. Although primarily designed for the chemistry classroom this program also has uses on general studies and economics courses.
  Age range: 13 – 18 years

For Archimedes 305 and above

■ *Organic Analysis Pack*
▶ *Longman Group UK Ltd*
◀ *£21.50*
Individual price: £18.50

This pack includes "Organic Analysis" and "Gas Chromatography".

- Organic Analysis gives students the opportunity to practise deductive analysis and revise their knowledge of some of the properties of organic compounds.
  Age range 16 – 19 years
- Gas Chromatography is a simulation of the separation of some organic compounds to show the application of qualitative and quantitative analysis.
  Age range 16 – 19 years

For Archimedes 305 and above

■ *A-level Chemistry Software*
▶ *Longman Group UK Ltd*
◀ *£29.50*

This software consists of two packs. Each program illustrates one key aspect of the subject, the majority fully using high resolution colour graphics.

It is suited to both teacher demonstration and individual student revision.

Using these programs the key concepts of each topic are quickly covered and clear straightforward instructions for use are set out in an accompanying booklet.

- Pack 1 features:
  Acid Dissociation; Boyle's Law, Maxwell-Boltzmann distribution, Mole calculation; Molecular structures and names; pH curves; Pressure simulation and Radioactive decay.
- Pack 2 features:
  Born-haber cycle; Curves using the Van der Waals equation; Haber and contact processes; Orders of reaction; Three-dimensional graphs and Trends in the periodic table.

For Archimedes 305 and above

■ *Chemdata*
▶ *Longman Group UK Ltd*
◀ *£34.95*

Chemdata is a package consisting of a data plotting program and a database editor. The plotting program enables the user to display chemical data stored in the databases in a number of different ways: numerically or graphically, on the screen or on the printer. Graphs can be 'overlayed', one on top of the other making it particularly useful for investigating periodicity.

The database editor is an easy to use management system enabling the user to add data, update information and to create new files of data. Chemdata comes with a number of data files including melting point, relative atomic mass, molar heat capacity, atomic volume etc.

Age range 16+.

For Archimedes 305 and above

Computing and Information Technology

■ *Music Logo*
▶ *Logotron Ltd*

Music Logo is a package which lets you produce music with Logo, using familiar musical terms and notation – such as crotchet, minim, F♯, G, B♭, Organ and strings – to compose and play your own computer-generated music in a Logo microworld. Over 50 Music Logo primitives provide for setting pitch and duration, chords, tempos, instruments, channels and voices, and the software takes advantage of the Archimedes' powerful sound potential.

For Archimedes 305 and above

■ *Control Logo*
▶ *Logotron Ltd*
◀ *£18.40 inc VAT and p&p*

Control Logo is a language package for exploring computer control applications. Now revised with extra primitives for 'natural language' programming and increased speed. Control Logo lets you talk to all the ports using Logo commands, and will work with most interfaces and controllers.

A new primitive, COUNTER, automatically registers input changes (feedback), and enables true control applications with Logo procedures.

For Archimedes 305 and above

■ *Archimedes Logo*
▶ *Logotron Ltd*
◀ *£71.88 inc VAT*

The Archimedes Logo pack has been developed jointly by Logotron and Acorn, and is fully compatible with Logotron Logo. Archimedes Logo takes advantage of the Archimedes advanced RISC technology; it also includes editing functions and Logotron's INSTALL primitive, which allows Logo to be extended with specialised application modules.

Site licence £348.88 inclusive.
For Archimedes 305 and above.

■ *BASE-IT*
▶ *AVP Computing*
● *COM 213*
◀ *£24.50*

This database allows user defined records to be stored in as many files as you like. It is capable of storing 1000 records per file, with each record containing twelve fields. It has a menu of elevel filing facilities and in-built functions to help you with your filing, for example, key 0 will give a list of any files present on the disc, key 1 will display a prompt to load the previous file.

To summarise the facilities available – you can create and sort ffiles, add, delete, search, view, copy and amend records, and edit files.

For Archimedes 305 and above

■ *Computer Control*
▶ *AVP Computing*
● *COM 167*
◀ *£24.50*

This is a package of three programs simulating the control of a greenhouse, or a robotic arm, and of a chemical plant. The aim of the package is to help students appreciate how computers use the signals in the input and output ports to control various applications, and to give them some understanding of what is involved in three particular examples. The student is actively involved throughout, and has to control the situation by studying the bit pattern of 1s and 0s in the sensor port, and then place another bit pattern in the activator port to take appropriate action.

Notes and worksheets are provided which encourage the student to develop an algorithm to control the process.

For Archimedes 305 and above

■ *Logic Gates*
▶ *AVP Computing*
● *COm 4*
◀ *£24.50*

Logic gates is a package of the basic building blocks from which computer circuits are constructed.

In this program the computer will simulate the behaviour of five types of logic gates and display the connecting leads. The unique feature of this program is its ability to simulate the behaviour of a sequence of logic gates

designed by the user. Not only can four gates be connected to form a circuit but this circuit can be integrated into a single chip and this chip used as part of a new design. It is therefore possible to combine a maximum of sixteen gates into a single circuit and simulate its behaviour. Designs can be saved to and loaded from disc.

Detailed notes are provided to enable the user to become familiar with the program, and to introduce the beginner to the subject. The disc includes the simple designs used in the notes and in addition to a full adder and binary decoder as examples of more complex circuits.

The latest version of this program has the capacity to simulate a wider range of sequential logic designs enabling, for example, gated bistable circuits to be demonstrated.

A suitable version is needed if this is to be installed on and executed from a hard disc, or from Econet. A site licence is required.
For Archimedes 305 and above

■ *Software Tools*
▶ *RESOURCE*
● *PE678*
◀ *£14.95*

The Software Tools and library provide a series of programs and procedures to solve a variety of data processing problems.

Developed as part of the BDP pack the library is designed to promote a structural, practical approach to problem solving, and understanding of the basic concepts of data processing.

The package includes a set of problems that introduce data processing and seven case studies of teachers' classroom experience.
For Archimedes 305 and above

Craft, Design and Technology

■ *2D and 3D Drawing*
▶ *AVP Computing*
● *CYG 7*
◀ *£24.50*

The material on this disc is designed for use by students of Craft, Design and Technology and covers basic work in 2D and 3D projections. The main elements covered are: 1st and 3rd angle orthographic projection; isometric projection; and oblique projection.

There are also four exercises designed to examine the students' understanding of the different drawing projections. All individual programs are linked with a menu, hence the student needs no detailed knowledge of how to use a micro-computer and yet is able to select the topic to study and to progress at his/her own speed.

The presentation of the material enables the student to see the 'build-up' of each projection, in construction lines, and so is suitable for initial learning, revision or generally reinforcing the comprehension of, and the drawing techniques used in, these types of standard drawing projections.
For Archimedes 305 and above

■ *CDT Selection*
▶ *Soft-Teach Educational*
◀ *£12.50*

This selection of the two programs, dealing with reading a micrometer screw gauge and Vernier calipers make this disc a useful addition to the CDT department software library.

The package includes a manual.
For Archimedes 305 and above

■ *Perspective*
▶ *Aztec Software*
● *GH12*
◀ *£9.50*

Use the 'Mouse' to pin point the position of the horizon, then draw any two-dimensional sketch on screen. The program then produces a full perspective version of one original shape. More perspective views of the shape can be viewed on the screen at any position.
For Archimedes 305 and above

■ *CADVISE in True 3D*
▶ *Academic Software*
◀ *£49.95*

This educational package for computer aided design, takes full advantage of the speed and extra memory of the Archimedes system. Hidden-line removal and rotation of complex perspective views will all be accelerated.
For Archimedes

Cross curricular subjects

■ *DIYBase*
▶ *RESOURCE*
● *PE122*
◀ *£24.95*

DIYBase is a database creator. It is designed for creating stand-alone, dedicated databases. For example, the user may decide to create a database to perform a study of breeds of dog. DIYBase can be used to create a database shell specifically for this. Once the structure has been created any number of files may be developed using the program shell.

DIYBase is a versatile software tool for use with children from age seven and upwards. Its facilities include the ability to create graphs and charts as well as to perform simple mathematical operations and calculations.
For Archimedes 305 and above

■ *Airline Reservation Package*
▶ *Scetlander*
◀ *£16.50*

This popular package, useful in GCSE Computer Studies and I.T. courses, demonstrates one of the main uses of computers - storing and accessing important information which may change from minute to minute.

Teaching about real-time systems can be very dry without a practical demonstration and it can be difficult to explain the range of programs and facilities which are required to sustain a rapidly changing bank of data. Airline Reservation overcomes these problems and presents the topic in an interesting context and practical manner.

The program is available in both stand alone and in Econet (level II or III) formats. When ordering, please specify which format is required.

This program can be executed from a hard disc.
For Archimedes 305 and above

■ *Datafile of Educational Software and Addresses of Interest to Computer Users in Education*
▶ *Nick Evans*
◀ *£20.00*

This package contains two discs. The first provides over 3100 software titles, their publishers, prices, machine, age range and subject area. The second disc contains 950 addresses, categorised according to the service provided by the company listed.

The two data discs are probably the most compact quick-reference guide of its type. They are for use with Minerva's System DeltaPlus or Viewstore.

Using this information it is possible for educationalists and parents to locate appropriate software for use in school and at home. The power of the information systems used means that "sets" of packages may be identified for particular curricular purposes and related to specific age ranges.
This product can be installed on and executed from a hard disc or from Econet.
For Archimedes 305 and above

English

■ *Wordsquare*
▶ *Squirrel Software*
◀ *£49.95*

Wordsquare is for compiling and solving crosswords. A built-in wordbank of more than 72000 words and phrases can be called on. A regular patterned 15 x 15 crossword square is completed by the computer within 60 seconds.

Educationally, it is suitable for pupils of all ages, and can produce language activities, games and progress papers.

For Archimedes 305 and above

■ *Crossed Words*
▶ *Aztec Software*
● *TC14*
◀ *£9.50 inc VAT+p&p*

Crossed Words is in five sections, each producing a different wordsquare of a hundred letters. Use the 'Mouse' to underline where you think the missing words are. Each square is built around a theme, with correct solutions shown on screen in their correct position as they are discovered.

A scoring system is built in and can list all words not found at the end of each wordsquare.

For Archimedes 305 and above

■ *Hangman*
▶ *Micro-Aid*
● *301*
◀ *£6.84 inc VAT*

This is a word guessing game with a choice of five different languages and a range of words with translations.

The program is written in BASIC and it is easy for teachers and parents to change words to alter the languages used.

English autonyms, English synonyms, French, German, Italian and Spanish are included, plus the usual grisly graphics.

For Archimedes 305 and above

■ *Entertaining English*
▶ *H.S. Software*
◀ *£11.95*

This package contains two graphic games to give children from 7–11 years experience in using and understanding verbs, adverbs, and past and present tense.

For Archimedes 305 and above

■ *Crosswords*
▶ *H.S. Software*
◀ *£7.95*

This is a suite of programs that allows children and adults to solve and create crosswords on the computer, print them out, and edit them simply and effectively. The package comes complete with a range of crosswords of varying difficulty, and is suitable from age 8 years to adult.

For Archimedes 305 and above

General science

■ *Bridge Building*
▶ *Longman Group UK Ltd*
◀ *£17.50*

This is a program designed to help children appreciate the factors affecting the design of bridges. It is possible to consider beam, Warren, and arch bridges.

Age range 11 – 16 years

For Archimedes 305 and above

Geography

■ *Climates*
▶ *Longman Group UK Ltd*
◀ *£21.50*

This program uses a world map to locate the major climate regions. A library of rainfall and temperature data is held for eighty stations and can be listed, displayed on a climograph or located on the world map.

A test routine uses the library data and the three display techiques, supplying clues in response to wrong answers. An interactive section enables users to type in their own statistics which the computer will analyse and identify. The same three display options are offered for the user's own statistics. There is also a reference system which provides short notes on all the climate regions. Age range: 14–18 years

For Archimedes 305 and above

■ *CIC Population Pack*
▶ *Longman Group UK Ltd*
◀ *£27.50*
Individual price £18.50

These demonstration and utility programs contain recent demographic data and illustrate population growth by means of line graphs and population pyramids. They also aid enquiry based learning by calculating statistics for pupils' data typed in at the keyboard.

DEMOG 1

Uses statistics for percentage growth, birth rates and death rates to show changes to an initial population over fifty year periods. The program contains data for ten countries and allows pupils to type in data for other populations.

DEMOG 2

Uses age and sex specific statistics to generate population pyramids based on five year cohorts. The program contains data for six countries and projections can be made at five year intervals. The effects of altering the age and sex, specific death rates and the birth rates may also be explored to simulate demographic change. Age range: 14–18 years

WORLD POPULATION MODEL

This program enables students to study objectively the problems of population growth, using a Malthusian computer model of the world population, and food and energy supplies.

Students can explore the quantitative effects of the birth and death rates, the percentage of land used for cultivation, the discovery of new oil reserves and a change in people's diets. Once they have set their chosen variables, a graph plots predictions at five year intervals for up to 300 years if required. Age range: 15–18 years.

For Archimedes 305 and above

■ *CIC Farming Pack*
▶ *Longman Group UK Ltd*
◀ *Pack Price £37.50*
Individual price £18.50
Farm Game

This is a simple decision making game for younger pupils who choose the crops to be planted on the imaginary 'Maypole Farm'. Pupils aim to make profits but discover that farming is a high risk business as the weather changes from year to year.

By taking account of the weather patterns, and past profits, pupils reselected the crops to achieve better profits over periods of four years or more.

To illustrate regional variations in weather patterns, Maypole Farm may be located in three different regions of Britain. This allows pupils to discover that good crop combinations in one region may not be suitable elesewhere and thus learn one factor behind contrasts in British agriculture.

Age range: 8–13 years

Farm Resources Game
This program represents a new generation of farm games. It helps a wide range of secondary school pupils to explore a number of variables involved in successfully adapting farming to the environment.

The model farm can be located anywhere in Great Britain. Pupils try to match their cropping pattern, not only to the climate, but also to balance their use of labour around the year, to make the best use of expensive machines, and to meet modern rotational requirement. More advanced students can introduce a dairy herd with its requirements for grazing and fodder crops to further influence land use.

Age range: 11–16 years.

Rice Farming
Students play the part of rice farmers in India, and are faced with decisions about how to manage their farms while coping with environmental disturbances such as drought and pest attack.

Students must consider the problems of purchasing, crop yield and marketing and should gain an understanding of the complexities of decision making for Third World farmers.

Age range: 11–16 years.

■ *South Eastern Railway Game*
▶ *Longmans Group UK Ltd*
◀ *Individual price £18.50*
This simulation is a competitive one in which two companies try to make profits for shareholders whilst building and operating rival railway networks.

The simulation is set in the south east of England during the mid nineteenth century and is supported by detailed background information in the Students' leaflets and Teachers' Guide. Students are divided into two groups and select the railway lines to be built by their respective companies. The companies build main lines from London Channel Ports and may also set up ferry terminals and branch lines to increase their profits.

The simulation may be played at a superficial level by younger pupils but it can be more fully explored by older students of Geography, History or Economics who are interested in the social and economic history of the 19th century.

Age range 14–18 years
For Archimedes 305 and above

■ *Towns of Great Britain*
▶ *Aztec Software*
◀ *£9.50 inc VAT+p&p*
This package provides the user with a high resolution map of Britain printed on the screen, and a flashing cursor pin-pointing at random a place on the map corresponding to a sizeable town.

In addition, there appears on the screen an anagram of the name of the town, to assist the student to type in the correct place. A score out of ten is provided; with a reward pattern for the correct solutions.

There are a large number of towns in the memory and it is a simple matter to add more of your own.
For Archimedes 305 and above

■ *Global View*
▶ *Argus Specialist Publications*
● *DB88*
◀ *£12.00*
This package features world maps and time zones; different map types; a continental drift map; maps displayed from 180 million years ago and predictive sequences. The student can design his own planet and printout any map in segments for model making. The package is animated, it can be installed on and executed from a hard disc.
For Archimedes 305 and above

■ *Distances*
▶ *Micro-Aid*
◀ *£5.69 inc VAT*
Having full graphics and colour, this BASIC program offers maps of the **UK., as well as Europe and the World, with the ability to calculate the great circle distance between any two points on the surface of the earth. A marker cross appears for 75 well known places and the distance can be calculated automatically. For other places the longtitude and latitude of either or both places can be entered.
** (Plus Australia, the Benelux countries and Iceland.)

Other countries are available to special order.
For Archimedes 305 and above

■ *Flags*
▶ *Micro-Aid*
◀ *£5.69 inc VAT*
Full colour representations of the flags of the world offer the educationalist or parent the opportunity of developing in children an interest in the national flags of the world. There are 96 flags, and four questions relating to the name, continent, capital and population can be asked of each country.
For Archimedes 305 and above

History

■ *Forge*
▶ *RESOURCE*
● *PE114*
◀ *£34.95*
The industrial revolution and the growth of the iron and steel industry are the subjects for this theme pack. They are developed through extensive materials including a disc of programs, workcards, photographs, maps and charts and teacher's notes. The programs provide exercises in siting a forge and a furnace, financial management, charging a blast furnace and examining data relating to the inhabitants of a village affected by the changes in lifestyle brought about by the onset of the industrial revolution. The pack provides sufficient material for a full class project extending up to a term in length.
For Archimedes 305 and above

■ *Cateby Manor*
▶ *RESOURCE*
● *PE317*
◀ *£24.95*
This pack consists of three programs. Cateby Manor: A database of the manor's population (including a sophisticated graphs pack). Cateby Map: a screen map which allows children to search Cateby for additional information in text and/or pictures and also to search the village for input of their keyboards. Lastly, Cateby Words: a supplementary vocabulary program.
For Archimedes 305 and above

■ *Castle Pack*
▶ *RESOURCE*
● *PE302*
◀ *£19.95*
This is a pack of resource material for the teacher. The contents of the pack are for children who have a reading age of 9+, and are such that there is sufficient material for an average class of 30 pupils to be occupied on the project for at least half a term.

The accompanying datafile program shows that there were 67 people in the castle on the date in question. The pupils' work-sheets provide activities relating to this datafile program and if they complete all the enquiries suggested they will build up a great deal of knowledge about the Castle and its inhabitants and life in these times.
For Archimedes 305 and above

■ *Analysis of Data from Burial Registers*
▶ *Longman Group UK Ltd*
◀ *£24.50*
Individual price: £18.50
This is a program for analysing information in a burial register. It can be used to introduce pupils to the methods of handling evidence in a statistical form. It demonstrates the meaning of 'average' and the importance of distribution tablets. There is a facility for entering your own data.
Age range 13 – 16 years
For Archimedes 305 and above

■ *Godfrey*
▶ *Longman Group UK Ltd*
◀ *£24.50*
Individual price: £18.50
This program is about the mystery of the death of Sir Edmund Godfrey in 1678 at the time of the Titus Oates Plot. It is designed to teach pupils about the problems of handling evidence. It can be used to introduce pupils to ambiguities in sources and to the uncertainty of historical explanations of the past.
Age range 13 – 16 years
For Archimedes 305 and above

■ *Census Analysis*
▶ *Longman Group UK Ltd*
◀ *£39.95*
A large unit providing an absorbing introduction to the problems of dealing with historical evidence. It uses the returns of the 1851 Census to give a fascinating insight into the lives of a whole community. Teachers and students can encode their own data, creating new files based on census returns from their local area, so encouraging historical research at a primary and local level.
Age range 9 years upwards
Note: all require twin disc drives and use high resolution graphics. Census Analysis will not run on a network.
For Archimedes 305 and above

Mathematics

■ *NT*
▶ *Keele Mathematical Education Publications*
◀ *£8.00 inc VAT*
This is a collection of 18 packages in BBC Basic intended for use with IM Hall's booklet 'Topics in Number Theory' (published by KMEP 1984), and aimed at 6th form/1st year university students, and teachers. The packs are accompanied by a 56 page set of activities and exercises which introduce related ideas and develop topics further.
For Archimedes 305 and above

■ *Matpack*
▶ *Keele Mathematical Education Publications*
◀ *£14.00 inc VAT*
This is a suite of programs for matrix manipulation and for 2D and 3D transformation geometry; some aspects are suitable for GCSE pupils, but the target audience is A-level pupils and teachers and 1st year university students.
It includes printed documentation and worksheets comprising 200 pages.
For Archimedes 305 and above

■ *Basic Mathematics*
▶ *Aztec Software*
● *BD12*
◀ *£9.50 inc VAT+p&p*
Basic Mathematics has three separate sections, each with five levels of difficulty. Numbers appear on screen correctly set out underneath each other. Wrong answers are corrected. Correct answers are rewarded by helping the 'Princess' escape, from her dungeon.
Suitable for age group five to adult; especially suitable for children with learning difficulty.
It can be installed on and executed from a hard disc and Econet, and has multi-user capability.
For Archimedes 305 and above

■ *Times Tables*
▶ *Aztec Software*
● *GH11*
◀ *£9.50 inc VAT+p&p*
In Times Tables the operator has the choice of which table to learn. Random questions are asked, and the correct answer rewarded by building a house in stages. Incorrect answers produce the complete table on screen with enhancement of the correct answer. There is automatic random repeat of any question answered incorrectly. After ten questions, the scoring system is shown together with the time taken to answer.
It can be installed on and executed from a hard disc and from Econet, and has multi-user capability.
For Archimedes 305 and above

■ *Bearings Suite A*
▶ *Scetlander*
◀ *£21.50+£1.50 p&p*
This program presents a graphic way for primary school children to learn the basic concepts of orientation. The program provides teachers' sections which allows detailed tailoring to suit pupils' needs, and pupils are always given graded help by the program if they make several mistakes.
There are three sections:
Left or Right
'Left or Right' tests knowledge of left and right gained through practical experience.
Playpark
This program aims to give confidence in, and understanding of, the concepts of left and right; to test and reinforce knowledge through practical experience in the context of Playpark.
A Walk Around the Zoo
'A Walk Around the Zoo' consolidates the pupils understanding of the work covered in the first two sections. It familiaries the pupils, with forward movement and turning through 90 degrees and introduces the pupil to simple-rate planning.
This product can be installed on and executed from a hard disc or from Econet.
For Archimedes 305 and above

■ *EMAS*
▶ *Keele Mathematical Education Publications*
◀ *£8.00*
This is a collection of programs to be used in conjunction with the book 'Elementary Mathematics from an Algorithmic Standpoint' by Arthur Engel (published by KMEP 1984, translated from German editor by F.R. Watson). The programs are listed in the book which is aimed at A-level students and their teachers.
For Archimedes 305 and above

■ *Fourier Transform Movie*
▶ *Musbury Consultants*
◀ *£125.00 inc VAT*
'Maths Movies' is a package designed to help students appreciate the subtleties hidden in mathematical formulae. The first series concentrates on two dimensional fourier transforms or transforms of images. The transform converts the time domain signal into a frequency domain signal. That is, any shape waveform can be made from a series of sine and cosine waves.
More difficult is the transition of images. An image can be considered to be a two-dimensional signal, a fourier transform will show the information in the image in terms of frequency. Then many image-filtering, reconstruction

and enhancement techniques can be applied before passing the data through an inverse transform to get an improved image.

Fourier Maths Movies have been made and several stored as systems sprites. These can be played back at a variable rate down to five a second for the full sequence. This is achieved by pre-calculating the frames of the movie and storing them on disc. Then a 'projector program' shows them along with the image. The transforms are plotted as in intensity plot with false colouring providing a wealth of detail.

Each disc contains two movies of images as shown below:

Movie Disc 1 – Two discs colliding + four discs colliding

Movie Disc 2 – Bar rotating 90 degrees + cross rotating 90 degrees

Movie Disc 3 – growing disc + Growing square

Movie Disc 4 – impulse + square grid with increasing spacing

Movie Disc 5 – increasing frequency sin wave + shifting phase sin wave

This program is written in BASIC and makes use of pre-installed drawing routines. The core of the program is a single dimension fast fourier transform that runs in just under five seconds. Full instructions are supplied along with the routines to be able to produce the above five discs.

For Archimedes 305 and above

■ *Plotter*
▶ *The Shell Centre, University of Nottingham*
◀ *£15.00 inc VAT and UK p&p*

PLOTTER is a versatile, mouse-driven graph plotter written especially for the Archimedes computer. It plots cartesian and other graphs from both mathematical functions and from data files. It combines a high standard of speed, accuracy and ease of use. A wide range of classroom activities are supported including 'guess the function' games and simple modelling.

For Archimedes 305 and above

■ *Teaching with a Micro: Maths 5*
▶ *The Shell Centre, University of Nottingham*
◀ *£15.00 inc VAT and UK postage*

NUMBER is an information-handling program about numbers. As well as telling you about simple properties of whole numbers, it allows you to add in your own information and build up a personal database. ALCHEMY, PYXIDIUM and SWAP are three simple 'microworlds', for investigation and problem solving. ALCHEMY is set in a kind of science laboratory. In PYXIDIUM, a large black box has mysteriously appeared in your back garden. SWAP involves discovering some rules for transforming one animal into another. The programs are intended mostly for pupils aged between 10 and 16.

For Archimedes 305 and above

■ *Teaching with A Micro: Maths 4*
▶ *The Shell Centre, University of Nottingham*
◀ *£15.00 inc VAT and UK p&p*

These five mathematical games are intended mostly for pupils aged between 9 and 14. TAKES and ADDERS is a version of Snakes and Ladders in which both the snakes and ladders are invisible. Pupils can design and save their own versions of the game. LINEOUT develops estimation techniques in a game where you must land in different regions of the number line. MXplusC is a game in which the player claims as many whole number co-ordinate points as possible by drawing straight lines across a grid. NCROACH is a territorial game played on a board with 100 squares. GHOSTS is an arcade game which may help to develop pupils' use of co-ordinates.

For Archimedes 305 and above

■ *Teaching with a Micro: Maths 3*
▶ *The Shell Centre, University of Nottingham*
◀ *£15.00 inc VAT and UK p&p*

The four programs in this pack are intended mostly for pupils in the 11 to 16 age range. TIMES uses reaction times to explore some simple ideas in statistics. ENGRAM is a program for exploring patterns in natural numbers. DOGS demonstrates a number of properties of equiangular (or logarithmic) spirals. SPLOT is a simple investigative program for plotting spirals which produces some dramatic graphical effects.

For Archimedes 305 and above

■ *Teaching with a Micro: Maths 2*
▶ *The Shell Centre, University of Nottingham*
◀ *£15 inc VAT and UK p&p*

The four programs in this pack are intended largely for use with classes aged between 11 and 14 years. BOTTLES uses animated graphics to make us think about the relationship between graphs and events in the real world. SUNFLOWER is a problem solving exercise where you are challenged to grow the world's tallest sunflower. TRAFFIC develops graph interpretation skills by using animated graphics to help pupils' understanding of distance-time graphs. ZOOM provides a rich environment to explore and develop ideas about decimals. It uses animated graphics to magnify or 'zoom in' on any part of the positive and negative number line.

For Archimedes 305 and above

■ *Teaching with a Micro: Maths 1*
▶ *The Shell Centre, University of Nottingham*
◀ *£15.00 inc VAT and UK p&p*

The five programs in this pack are intended largely for classes aged between 11 and 14 years. DECODE is a program about probability which challenges you to break a code and read a secret message. PLOD is a mathematical investigation. As superintendent of police, your job is to police the city with as few policemen as possible. SALESMAN is a simple approach to the travelling salesman problem. SINCOS uses the computer as a visual aid to introduce sines and cosines. VECTOR is a treasure hunting game which helps to sharpen pupils' understanding of the difference between vectors and co-ordinates.

For Archimedes 305 and above

■ *132 Short Programs for the Mathematics Classroom*
▶ *Mathematical Association*
◀ *£5.95 (book) inc VAT+p&p*
£8.50 (disc)

These are basic programs to accompany the book of the same name, also available from the mathematical Association.

For Archimedes 305 and above

■ *Statpack*
▶ *Micro-Aid*
◀ *£11.44 inc VAT*

This package covers mean averages: geometric, harmonic, median, moving and progressive averages; standard deviation and coefficient of variation. Also included are chi-square, bar charts, histograms, linear regression, linear coefficient, and a spare section for your own use.

For Archimedes 305 and above

■ *Trigonometry*
▶ *AVP Computing*
● *COM 115*
◀ *£24.50*

This is a suite of programs which may be used by a GCSE student for revision purposes or by a teacher introducing trigonometry to the class. With the aid of excellent graphics and clear teaching instructions, the programs cover pythagoras, sine, cosine, and tangents, sine rule, cosine rule, 3D geometry and typical exam questions. Detailed examples of how to solve problems are

given throughout and solutions to the problems are checked after the students have attempted them.

A suitable versionis required if this product is to be installed from a hard disc or from Econet.

A site licence is required.
For Archimedes 305 and above

■ *Maths Translations*
▶ *AVP Computing*
● *COM 8*
◀ *£24.50*

This program deals with the translation of triangles and quadrilaterals on a progressive scale. There is a facility for varying the speed of progress. It explains how to move triangles and quadrilaterals on a grid. Matrix calculations are explained. At the end of each section there are tests with a revision if scores are not adequate. The progressive nature of the program makes it ideal for individual teaching and revision, as well as for pupil use.

A suitable version is required when it is to be installed on and executed from a hard disc, or from Econet.

A site licence is required.
For Archimedes 305 and above

■ *Angles and Trigonometry*
▶ *AVP Computing*
● *COM 39*
◀ *£24.50*

These programs are suitable for use by teachers or students of mathematics or physics.

Each of the programs presents important principles and facts concerning trigonometry. The relationships between angles and their trigonometrical functions can be difficult to grasp by reading and the study of static diagrams. These programs present the facts through the use of moving diagrams and graphs. The intention is to aid the student to understand the important concepts involved in each case.

The programs provide the teacher with an 'animated blackboard' as a very clear way of introducing or illustrating the topic. For example, graphs are quickly produced which are of the correct shape and have more impact than freehand drawings. The programs are a means of displaying changing quantities in a convenient and clear way and the fact that the model responds to the learner's input, allow him to test his own understanding and makes it an efficient learning aid. The programs are also suitable as a revision aid to the topics.

A suitable version is required if this is to be installed on and executed from a hard disc, or from Econet.

A site licence is required.
For Archimedes 305 and above

■ *Transformations*
▶ *AVP Computing*
● *COM 136*
◀ *£24.50*

This is a package which investigates combinations of the simple transformations, rotation, enlargement, reflection, translation and shear with an animated display of up to five successive transformations, which may be replayed as often as you wish. The object to be transformed may be a standard triangle or a simple figure that you input yourself, on the same disc, graph allows up to three graphs to be drawn in different colours using the input of functions in algebraic form rather than in computer form and a variety of trig functions using single-key entry.

A suitable version is required if this is to be installed on and executed from a hard disc, or from Econet.

A site licence is required.
For Archimedes 305 and above

■ *A-level Maths with Statistics*
▶ *AVP Computing*
● *COM 137*
◀ *£24.50*

A package of programs designed for students working towards the combined A-level in most syllabuses.

Graph allows up to three graphs to be displayed at any one time. Input is in algebraic form, with single-key entry for a variety of functions. Angles can be in degrees or radians, and combinations of previous graphs can be simple entered. Dy/dx builds up families of solutions of differential equations of the form dy/dx f (x.y) with the user specifying a starting point and an incremental step along the tangent.

Samples introduces the student to random sampling and the Central Limit Theorem for means and proportions from a population of names. Either the sample or histogram is displayed.

Binomial demonstrates the relationship between the Binomial, Normal and Poisson distributions.

Scatter allows entry of a scatter diagram, and takes the student through the steps of drawing two regression lines using ideas related to Kendall's rank correlation coefficient.

A special version is required when it is to be installed on and executed from a hard disc, or from Econet.

A site licence is required.
For Archimedes 305 and above

■ *A-Level Matrices*
▶ *AVP Computing*
● *COM 141*
◀ *£24.50*

This disc covers the principal matrix topics needed for A-level, especially planes and the solution of 3 x 3 equations, matric inversion and determinants.

The first program gives practical examples of sketching planes and the next illustrates the intersection of three planes and their various possible configurations. This ends with a test.

Another program shows graphically the principal transformations of the unit cube, especially squashing transformations. Row operations are considered in detail and users are then invited to solve equations and invert matrices by entering matrix elements on the screen.

Help is given when needed.

The programs are written for A-level candidates either with one computer in classroom or with access to a network.

A suitable version is required also when it is to be installed on and executed from Econet.

A site licence is required.
For Archimedes 305 and above

■ *The Puzzle Palace*
▶ *AVP Computing*
● *COM 194*
◀ *£24.50*

Trapped in the Puzzle Palace on a cold and windy night, you make a desperate bid to escape through the creaking old door. However, this adventure is not for the rash or impulsive thinker. It demands all the pupils' problem-solving strategies in order to make their escape.

Throughout the adventure, many varied mathematical activites are encountered, their solutions necessary to collect objects essential to complete the journey.

Decision-making, record-keeping, logic and map-making skills are fully encouraged. This program is designed to be used by small groups of adventurers, and to encourage rich mathematical discussion. It captures the pupils' interest by its colourful presentation and challenging situations, is mathematically demanding, but compulsive and fun. Suitable for 9 to 13 year olds.

A suitable version is required if this is to be installed on and executed from a hard disc, or from Econet.

For Archimedes 305 and above

Modern languages

■ *Uniword*
▶ *Coventry Polytechnic*
◀ *£20.00*

This is the Archimedes replacement for the Unitext multilingual authoring package.

Uniword allows the teacher to create text files in English, French, Italian, German or Spanish using the full range of accents and special characters. The programme has many word processing capabilities, so that text can be easily entered, formatted, edited and printed out. The text can be used with one of the following student programs: Unicloze, Unifill, Unigap and Unisub.

For Archimedes 305 and above in native arm mode (Unitext 6502 emu only)

■ *Unifill*
▶ *Coventry Polytechnic*
◀ *£20.00*

In this text reconstruction exercise, the text is displayed with all the words blanked out, to be replaced one at a time in any order. The student can recall the original text or ask for the first letter of any word. The text can be used for guided translation or transcription.

For Archimedes 305 and above in native arm mode

■ *La Princesse*
▶ *Aztec Software*
● *IW13*
◀ *£9.50*

All screen information is shown in French and the operator has to move around a maze with a 3-D impression shown on screen. Many on screen questions in French have to be answered in order to progress, search and rescue the Princess from the maze. There is on screen display of 'Sword Strength', 'French Francs', and the state of combat. New scenario each time the program is loaded.

It can be installed on and executed from a hard disc and from Econet and has multi-user capability.

For Archimedes 305 and above

■ *Unigap*
▶ *Coventry Polytechnic*
◀ *£20.00*

In this gap filling exercise, the text is displayed with preselected words or parts of words blanked out, and the student replaces each one in turn.

For Archimedes 305 and above in native arm mode

■ *Unisub*
▶ *Coventry Polytechnic*
◀ *£20.00*

In this substitution exercise, the text is displayed with pre-selected words or sections of words highlighted in turn. The student substitutes other words or parts of words for the highlighted sections.

For Archimedes 305 and above in native arm mode

■ *Unilex*
▶ *Coventry Polytechnic*
◀ *£20.00*

In this lexical analysis program, the text is sorted into an alphabetically ordered word list and the frequency of occurrence of each word is given. The resulting list can be saved to disc or printed out.

For Archimedes 305 and above in native arm mode

■ *Willi Wunderbar – Wald*
▶ *AVP Computing*
● *COM 132*
◀ *£24.50*

This program features German vocabulary, phrases and grammar using an animated character 'Willi Wunderbar'.

The student can choose to preview the questions, give multi-choice or type-in answers and review any misakes once the game is over. A final score is displayed together with the highest score in that session. The sets of questions are held as data files and the file handling program on each disc enables the user to write extra sets of questions. The very wide range of material included enables students to consolidate and extend their skills up to and including GCSE level.

Correct answers to questions on German phrases and vocabulary enable Willi Wunderbar to progress through a wood towards home. Incorrect answers move him nearer to the river and three mistakes means the game comes to a watery end! Eighteen question sets are available.

A suitable version is required when it is to be installed on and executed from a hard disc, or from Econet.

A site licence is required.

For Archimedes 305 and above

■ *Unicloze*
▶ *Coventry Polytechnic*
◀ *£20.00*

This program is made up of close exercises. The text is displayed with words blanked out at an interval selected by the student. Words are replaced one at a time in any order.

For Archimedes 305 and above in native arm mode

■ *Rusfill, Rusgap, Ruscloze, Russub, Ruslex*
▶ *Coventry Polytechnic*
◀ *£20.00*

These programs are similar to the Unitext series, but permit Cyrillic text with the full range of upper and lower case characters to be used. Cyrillic and Roman characters can be used together in the same text, if required, and a printout can be obtained. Rustext can also be used as a simple Cyrillic word processor for student handouts, giving up to 88 lines of 39 characters each.

The Rustext series is compatible with Econet.

For Archimedes 305 and above in native arm mode

■ *French Abroad*
▶ *Micro-Aid*
◀ *£6.84 inc VAT*

A package of educational computing enabling you to see, learn and test yourself on many varied and useful phrases. On the reverse of the tape there is the true sound of the language as correctly spoken for you to follow on your tape recorder. Following this course the average person will be able to enjoy their holiday or business trip to the full.

Included is a conversion section and useful letters in the foreign language so that you can book a hotel or other accommodation.

For Archimedes 305 and above

■ *Im Restaurant and Verkehrsunfall*
▶ *AVP Computing*
● *COM 157*
◀ *£24.50*

This is two interactive packages simulating role-playing exercise in German, written by Computing and Modern Languages teachers. Age range 12 to adult.

In Im Restaurant the computer plays the part of a waiter and the student has to order a meal and something to drink.

In Verkehrsunfall the student buys petrol in a garage, then is involved in an accident and has to answer a policeman's questions.

Both programs entertain as well as instruct, by the use of graphics, colour and sound. The packages can be used by younger, or less able students attempting longer, more complex responses. Any student unsure of an answer has only to type in 'help' to obtain assistance. Therefore the packages can be used for individuual learning as well as a whole class activity.

Worksheets provided with the programs contain reinforcement exercise and suggestions for paired-speaking activities.

For Archimedes 305 and above

■ *Die Prinzessin*
▶ *Aztec Software*
● *PS11*
◀ *£9.50 inc VAT+p&p*

Fight with Zwerge, Drachen, Riesen and Ungeheuer, and answer all the on screen questions which are in German. Search for three gold rings and ensure you have made enough german d. marks profit to escape and win the lady of the Lorely.

This is not suitable for children below the age 13.

For Archimedes 305 and above

■ *Six French Games*
▶ *AVP Computing*
● *COM 127*
◀ *£24.50*

These games are aimed at pupils in their first year of French, but also useful as revision for more advanced students.

Pupils enjoy competing with each other in these games, which require comprehension and (to a lesser extent) reproduction of French. Each game has both a basic and advanced version and topics covered are days, months, weather, school subjects, finding the way, leisure activities, fruit, eating out, etc. Full details including vocabulary used, are given in the accompanying notes.

A suitable version is required if this is to be installed on and executed from a hard disc, or from Econet.

A site licence is required.

For Archimedes 305 and above

Physics

■ *Rays and Waves*
▶ *Soft-Teach Educational*
◀ *£26.00*

The 12 programs are written for GCSE courses and cover various aspects of wave and ray reflection and refraction, longitudinal sound waves, Doppler shift effect, superposition, diffraction grating and Young's slits and AM & FM modulation.

A comprehensive manual is included in the package.

For Archimedes 305 and above

■ *Mechanics and Electricity*
▶ *Soft-Teach Educational*
◀ *£22.50*

The 9 programs cover Newton's Laws of Motion, Vector addition, a practical experiment "g by free fall", the DC motor, the micrometer screw gauge and Vernier calipers, all written for GCSE courses. The experiment requires extra hardware; a circuit diagram is provided although the hardware can be bought ready assembled.

The package includes a comprehensive manual.

For Archimedes 305 and above

■ *Physics Disc Three – A Level*
▶ *Soft-Teach Educational*
◀ *£22.50*

The 10 programs on this disc include superposition of waves, diffraction grating, Young's slits and the Doppler shift effect from the Waves and Rays disc, Newton's Second Law from the Mechanics and Electricity disc plus parallel and series LC circuits. There is also a capacitor charge/dischage program) a practical experiment requiring extra hardware - a circuit diagram is provided, hydrogen line spectrum and simple harmonic motion.

The package includes a manual.

For Archimedes 305 and above

■ *Practical Experiments Disc*
▶ *Soft-Teach Educational*
◀ *£12.50*

These 2 practical experiments, "g by free fall" and capacitor charge/ discharge, can be bought separately – circuit diagrams are included. The hardware can be made up at school or bought from Soft-Teach.

A comprehensive manual is included in the package.

This package requires a I/O Expansion card.

For Archimedes 305 and above

■ *Equilibrium and Crystal Structures*
▶ *AVP Computing*
● *COM 96*
◀ *£24.50*

There are three programs suitable for GCSE and A level students. Equilibrium is student interactive and reveals in bar chart form the per cent yield of reactants and products for five reactions under different conditions of temperature, pressure and initial reactant concentrations. The rules of equilibrium are clearly demonstrated, and a test on these rules is included.

Metal illustrates with colourful graphics the three crystal structures and unit cell types relating to metals and provides examples in each category.

Ionic similarly uses graphics to illustrate the structural features of three compounds and employs both space filling and ball and spoke images. Cleavage planes for one compound are shown in relation to its ionic arrangements.

A suitable version is required if this is to be installed on and executed from a hard disc or from Econet.

A site licence is required.

For Archimedes 305 and above

■ *Electric Circuits*
▶ *AVP Computing*
● *CYG 13*
◀ *£24.50*

This is a package of four programs: components give information concerning electrical components used in GCSE sciences courses. It also shows the symbols used in circuit diagrams and provides visual effects. In Alternating and Direct Current the difference between AD and DC is explained and the connection between AD and the sine curve is illustrated. Half wave and full wave rectification are introduced, first in terms of the sine curve and then by means of circuit diagrams with diodes.

Ohm's Law provides circuits with the following arrangements of resistors: single resistance; two resistances in series; two resistances in parallel. Students are able to choose the number of cells and also the value of each resistance. They are then required to calculate the total resistance and the current. If an error is made, then the correct answer is shown, together with an explanation.

Finally, Circuit Board provides a simulation of a school circuit board. It allows one, two or three cells, an ammeter, a variable resistance, a switch and any combination of bulbs in up to three parallel circuits. The ammeter records the overall current and warning is sounded if it is overloaded.

The circuits can be modified at any time.

For Archimedes 305 and above

■ *Investigating Radioactive Sources*
▶ *AVP Computing*
● *COM 100*
◀ *£24.50*

This is a collection of programs which simulate the investigation and identification of an unknown radioactive source, and is accompanied by data sheets and pupil worksheet.

When the program is run, a source is selected randomly and a choice of three experiments is available for its investigation. Results from these experiments are recorded by pupils, who must then make deductions about either the type of particles emitted or the half-life. At the end of each experiment, pupil deducations are checked and help is given if necessary (GCSE/16+).

A suitable version is required if this is to be installed on and executed from a hard disc, or from Econet.

A site licence is required.

For Archimedes 305 and above

■ *The Cathode Ray Oscilloscope*
▶ *AVP Computing*
● *COM 70*
◀ *£24.50*

This is a new and extended package explains diagrammatically and in a logical sequence the structure of the CRO and demonstrates the effect of changing the voltage applied to the X and Y plates.

While the CRO is shown in vertical section its screen is also displayed so that different effects can be fully observed. The AC effect and the introduction of a time basis is covered. A full screen display simulating the CRO screen is used to explore the effects of changing the time base, the Y plate gain and wave period. Several differently coloured displays can be plotted on the screen together. The time base can be switched off and an AC voltage applied to the X plates to investigate Lissajous' Figures, Gain, phase and period which can all be modified.

A suitable version is required if this is to be installed on and executed from a hard disc or from Econet.

A site licence is required.

For Archimedes 305 and above

■ *Light and Colours*
▶ *AVP Computing*
● *CYG 18*
◀ *£24.50*

This is a suite of six enjoyable programs to compliment practical work on light and colours. Suitable for age range 13 to 16. Topics covered include reflection, refraction, lenses, the mixing of primary colours and the user of filters.

For Archimedes 305 and above

■ *An Introduction to Electronics*
▶ *AVP*
● *COM 180*
◀ *£24.50*

This program brings together all the basic electronics required for a GCSE Physics or CDT course. There are four main teaching sections each of which use animated interactive diagrams with a minimum of text.

The section on potential dividers starts with bulbs in series before moving on to resistors in series, the potentiometer, and the use of thermistors. LDRs and reed switches. The section on the transistor covers the use of the transistor as a switch in the common emitter mode.

A section on logic gates enables students to build up truth tables for AND, NAND, OR, NOR and NOT gates.

The section on operational amplifiers familiarises students with the inverting and non inverting inputs and allows them to simulate the behaviour of the device with different input and feedback resistors.

The final section of the program is an introduction to electronic systems. In this section a wide variety of circuits can be designed and simulated on screen and stored on disc.

The six boards or sites can contain any of the temperature sensors, light sensors, logic gates, comparators, or transistors and relays covered in the previous teaching sequences. Using this section, students can solve simple problems and see how circuit elements can be combined to perform a useful function.

A number of sample designs are provided on disc.

For Archimedes 305 and above

■ *CIC Middle Secondary Physics Pack*
▶ *Longman Group UK Ltd*
◀ *£34.95*
Individual price: £18.50

This pack has three parts. The first is called Gravitational Fields and is an investigation of simple gravitational motion and the idea of escape velocity.

Age range 14 – 16 years

The second is titled Momentum and gives students an insight into the concepts of momentum and momentum conservation with the help of an animated simulation of a before and after study of a collision between two objects. Elastic and inelastic collision can be investigated.

Age range 13 – 16 years

The third part is Planetary Motion. This is an analysis of real and generated orbit data leading to laws of planetary motion. Suitable for students aged 14 and over who are learning about direct proportionality. The unit covers simple Newtonian gravitation applied to orbit theory for more advanced students.

Age range 13 – 19 years

For Archimedes 305 and above

■ *CIC A-Level Electricity Pack*
▶ *Longman Group UK Ltd*
◀ *£21.50*
Individual price: £18.50

This pack is made up of "Capacitor Discharge" and "Electrical Impedance". The first involves laboratory experiments and a computation of simple capacitor circuits.

Age range 16 – 19 years

The second charts the frequency response of circuits containing resistors, capacitors and inductors which can be defined by the user.

Age range 16 – 19 years

For Archimedes 305 and above

■ *CIC A-Level General Physics Pack*
▶ *Longman Group UK Ltd*
◀ *£34.95*
Individual price: £18.50
This pack includes: Acoustics; Mass Spectrometer and Photoelectric Effect.

Acoustics was designed originally for technology courses, this program has proved of considerable interest to physics teachers. The program calculates reverberation time of a room for different sound frequencies. The design of the room and materials used in its construction can be varied.

Age range 14 – 19 years

Mass Spectrometer is a simulation of a mass spectrometer allowing eventual identification of ions in an 'unknown sample'. Other investigations from a range of supplied samples may be tried. Further samples can be added to the simulation.

Age range 16 – 19 years

Photoelectric Effect is a basic introduction to the photoelectric effect and Einstein's photoelectric equation using a computer model and a simulation of Millikan's apparatus.

Age range 16 – 19 years
For Archimedes 305 and above

■ *Eye*
▶ *Longman Group UK Ltd*
◀ *£18.50*
There are two programs – EYE 1 and EYE 2 – which demonstrate how the eye works. The programs show the path of light from a point on an object to the retina. The user can alter the distance of the object from the eye, the size of the iris (EYE 1 only), the focal length of the lens, the condition of the eye and the effect of spectacles (EYE 2 only).

The program calculates whether the image is in focus for any chosen set of conditions. The path of light from a point on the object is plotted using high resolution graphics. Colour or black and white displays can be selected.

The programs are suitable for all abilities of pupils from the age of thirteen upwards. Several experiments can be done before the programs are used. Programs are not designed to replace them. Pupils should be familiar with the biological structure of the eye, the term 'in focus' and concave and convex lenses.
Age range 13 – 16 years
For Archimedes 305 and above

■ *Measure*
▶ *AVP Computing*
● *CYG 10*
◀ *£24.50*
This suite of programs aimed at 8 to 13 year old pupils consists of six main parts: Length, Area, Volume, Capacity, Mass and Temperature. It will help pupils to improve their understanding of different units of measurement by setting them a number of questions which test their ability to measure accurately.

In each program the teacher/pupil can choose from various options such as sound and the number of questions. Excellent graphics are used throughout to depict the items to be measured, and on screen help/correction are given both graphically and in text. Two main points brought out by each program are the type of units which should be used and the need for accuracy. Before the questions are set important information is given to the pupil and at the end of each program their score.

The programs can form the basis of a project dealing with measurement and can set up the questions much quicker than is normal in the classroom. They can also be used for class or group demonstrations/ discussions.
For Archimedes 305 and above

Primary education

■ *Bumper Pack 1*
▶ *H.S. Software*
◀ *£19.95 inc VAT*
This package is a compilation of eight colourful reading games for 5–11 year olds, converted from the BBC Read-Right-Away series.
For Archimedes 305 and above

■ *Droom*
▶ *Resource*
● *PE315*
◀ *£18.95*
Droom is an adventure based around a story in which the Princess Arminda has been kidnapped by the wicked dragon Droom and Prince Henry, her true love, has been turned into a frog. The children's task is to rescue Arminda and in the course of their adventure the children will encounter fairies, trolls, a witch and a wizard.

Although the program is set in the context of a story, progression through it depends upon the solution of a series of mathematical problems and puzzles. Extensive guidance for the use of the program is provided together with many back-up materials.
For Archimedes 305 and above

■ *Desk Top Stories*
▶ *RESOURCE*
● *PE061*
◀ *£29.95*
This program makes the best use of Archimedes graphics. It allows the user to create their own stories using the pictures built into the library. The program allows you to place a number (up to 200) of pictures or diagrams on each page and then allows the user to place their own text to illustrate the story.

If you are not satisfied with the 150 pictures available to you (including characters, buildings, trees, flowers etc) you can design your own. Once you have finished designing your electronics story book it can be printed out and converted into a paper version, pictures and all.
For Archimedes 305 and above

■ *Carryadd*
▶ *H.S. Software*
◀ *£7.95*
Carryadd is two packs which graphically demonstrate the process of addition and subtraction with or without the 'carrying' figure. Here a very faithful representation of the paper and pencil exercise, with a 'press any key' facility to allow use by physically handicapped pupils. Age range 5–9 years.
For Archimedes 305 and above

■ *Bert Boot*
▶ *H.S. Software*
◀ *£6.95*
This is an entertaining graphics game pack to help children make the difficult transition from knowledge of multiplication tables to their application to multiplication and division problems.

This process is covered in 8 carefully graded stages and features an arcade game as a reward for successful solving of problems. Age range 8–12 years.
For Archimedes 305 and above

■ *SuperSpell*
▶ *Aztec Software*
◀ *£9.50 inc VAT+p&p*

Superspell has ten sections each with twenty words. There are 'Hangman' style graphics with coffin and tomb if your spelling is really that bad! Incorrect answers are corrected and there is a musical medley for the really clever person.

SuperSpell is easy to amend and you can put in your own words. Age range 6 years upwards.
For Archimedes 305 and above

Sociology

■ *Sochart and Twochart*
▶ *AVP*
● *COM 43*
◀ *£24.50*

This is a suite of programs for GCSE and A level students of Sociology that is centred around the interpretation of sociological data.

Sochart includes data on occupational changes, divorce, and the distribution of wealth, and represents statistics by means of bar charts, pie charts and graphs.

Twochart includes data on voting choices, higher and further education and imprisonment. Both make use of questioning to check the students' understanding.

A suitable version is required if this is to be installed on and executed from a hard disc, or from Econet.
A site licence is required.
For Archimedes 305 and above

BOOKS

■ *ABC (Archimedes Basic Compiler)*
▶ *Dabs Press*
◀ *£99 inc VAT*

This package generates high-speed optimised machine code from virtually any BASIC V (or earlier) source program, vastly improving execution time, especially in numerical input and data-handling applications. It compiles to memory or disc and allows parameter design.
For Archimedes 305 and above

■ *C: A Dabhand Guide*
▶ *Dabs Press*
◀ *£14.95 Companion Disc £9.95 inc VAT*

This is a complete tutorial book on 'C' – which takes a proper tutorial approach with questions at the end of each chapter. It is practical throughout. There is a complete chapter on Acorn ANSI C and Arthur library. The companion disc contains many example programs. A full specsheet is free on request.
For Archimedes 305 and above

■ *Archimedes Operating System*
▶ *Dabs Press*
◀ *£14.95. Companion Disc £9.95 inc VAT*

This book is the ideal companion for Archimedes Assembly Language and the reference guide for all Archimedes users who take their computing seriously. This Dabhand Guide explains how the Archimedes works and examines the Arthur Operating System in microscopic detail, giving the programmer a real insight into getting the best from the Archimedes, whether it's a A305, A310, A410 or A440.

In addition the book contains many invaluable and useful program utilities to further enhance the power of the world's fastest microcomputer.
For Archimedes 305 and above

■ *Programmer's Reference Manual*
▶ *Acorn Computers Ltd*

This manual gives the experienced programmer detailed information on the facilities provided by the Arthur operating systems and contains most of the information needed when writing complex programs on the Archimedes computer. The manual begins with a discussion of fundamental operating system concepts and explains character input and output, the command line interpreter, the different filing systems, memory management and the program environment.

The manual also covers the various modules: the Window manager; the Font manager; as well as sound, the debugger and the floating point emulator, etc.

■ *Archimedes Assembly Language: A Dabhand Guide*
▶ *Dabs Press*
◀ *£14.95 Companion Disc £9.95 inc VAT*

This is a 368pp book showing you how to program into Archimedes (all models) in ARM Assembly Language. Plenty of examples and a companion disc is available including memory editor, disc sector editor, disassembler, and other utilities.

Full specsheet free on request.
For Archimedes 305 and above

EQUIPMENT

■ *Computer Trolley for Archimedes*
▶ *Ergon Designs Ltd*
◀ *£135.00 for the Education Market*

This trolley is more of an enclosure than a platform. It provides space for the computer, its keyboard and monitor, and an 80-column printer with a 2000 sheet box of paper. The trolley reduces to 600mm width for movement through narrow doors. It has large castors with stabilising feet.

There is also a single mains feed, neatly stowed, which powers a dual socket block that is totally enclosed in fixed trunking.

For the Archimedes machine there is a special version with a pull-out extension for the keyboard, at an extra cost of £25.00

At 600mm width, the trolley can be locked up for security in the Ergon Trolleysafe enclosure.
For Archimedes 305 and above

■ *Security Housings for Archimedes*
▶ *Remedian Instruments Ltd*
◀ *£95.00*

This is modular housing with unique interlocking security bar (SECURIBAR). It prevents tampering or removal without restricting normal operation in any working environment whether attended or unattended.
For Archimedes 305 and above

GAMES

■ *Minotaur*
▶ *Minerva Systems*
◀ £14.95

Minotaur is a 3-dimensional maze game using RISC graphics processing. Fast reactions are not required for this game, in which you must wander around the maze attempting to find the men before the Minotaur eats them. Many objects are found around the maze to aid survival.
For Archimedes 305 and above

■ *Hoverbod*
▶ *Minerva Systems*
◀ £14.95

Hoverbod is a droid who has been banished to another land for a crime he did not commit. To regain his credibility he must find all the diamonds by solving the many mysteries of the foreign land. As each level is completed the puzzles become more complex until the final, largest level is reached for the last final test. The game is presented in 256 colour mode.
For Archimedes 305 and above

■ *Missile Control*
▶ *Minerva Systems*
◀ £14.95

You can protect your cities from incoming missiles by shooting them down with your own. Your missile bases are positioned on the ground, from where you launch missiles, hopefully destroying the enemy. As you complete a level the amount of ICBMs and aircraft increases.
For Archimedes 305 and above

■ *Sink the Bismark*
▶ *Design People Software*
◀ *£25.00 inc VAT*

This is a Battle simulation game.
For Archimedes 305 and above

■ *Stockmarket*
▶ *Micro Aid*
◀ *£5.69 inc VAT*

A game for 1–4 players or teams of two or more. The game is run over a 3–10 year period and involves purchase and sale of shares and maintenance of your financial budget, with problems introduced from time to time which affect your business.

The program could come in useful for training students in co-operative teamwork or as a project on management training courses. A printer is not necessary, but could be used for printing out results.
For Archimedes 305 and above

■ *Cribbage*
▶ *Micro Aid*
◀ *£6.84 inc VAT*

The game is based on a popular pub card game and offers both the five or six card games, with two levels of skill.
For Archimedes 305 and above

■ *Supergolf*
▶ *Squirrel Software*
◀ *£12.95*

In this golfing simulation bunkers, ditches, out of bounds and gusting wind (five strengths in either direction) combine to make completing the 18 different holes in under 72 strokes quite difficult. The golfbag includes twelve clubs and a full personalised scorecard kept up to date for each of up to 4 players.
For Archimedes 305 and above

■ *Zarch*
▶ *Superior Software*
◀ *£19.95*

Zarch is the full version of the game included on the Welcome disc. This includes an on-screen map and enemy spacecraft to shoot. The object of the game is to prevent the enemy from polluting the world with a red virus. Zarch's radar shows where the various ships are and Zarch must fly towards and eliminate them before they contaminate the world.
For Archimedes 305 and above

■ *Conqueror*
▶ *Superior Software*
◀ *£24.95*

You can step into the tank of your choice and experience the thrill of controlling one of the most powerful land vehicles in the world in this game.

Conqueror takes place in a 3-dimensional world of roads, hills, villages, rivers and woodland. Set against this environment are a range of tanks, Russian, American and

German, each authentically reproduced taking into account their speed, armour and firing capabilities.

Three distinctive types of game are supplied, to cater for everyone from novice to expert, and the game is well documented with extensive information provided on all of the 12 types of tank involved.

■ *Terramex*
▶ *Grandslam Entertainment*
◀ *£19.95*

You can become one of the world's five reputable explorers and experience the dangers of a hazardous journey to find Professor Eyestrain and deflect the meteor to which only he has the solution.

For Archimedes 310 and above

■ *Archimedes Adventurescape*
▶ *Argus Specialist Publications*
● *DB86*
◀ *£17.00*

This adventure generator is menu driven with text descriptions, puzzle creator and full editing. Two full-scale adventures are supplied with a sample adventure whose creation is described step-by-step in the comprehensive manual. This package can be installed on and executed from a hard disc.

For Archimedes 305 and above

■ *Alerion*
▶ *Dabs Press*
◀ *£14.95 inc VAT*

This is a 'shoot 'em up' style arcade game package which includes 15 levels, 256 colour screens and sampled sound.

N.B. Due to memory limitations sampled sound is unavailable on the Archimedes 305 Computer.

For Archimedes 305 and above

■ *Desktop Games*
▶ *Gem Electronics*
● *GE1001*
◀ *£5.95*

This package installs 3 logic games (sliding block puzzles/mastermind/ leapfrog) and 2 utilities (* command and volume control) onto the desktop. Pictures created using Armpoint/ Artisan can be imported into Sliding Block Puzzle. Ideal for getting your children used to the mouse/desktop.

The program also contains a 'hidden' ARM-code version of Space Invaders.

For Archimedes 310 and above

MAGAZINES

■ *Archive Magazine*
▶ *Norwich Computer Services*
◀ *£14.50 inc VAT*

Archive is a subscription magazine with 'user group feel' which was started in October 1987. The first year's magazines are all still available – they contain 114 technical articles, 56 review articles and 197 different hints and tips. Virtually all the material is sent in by subscribers.

The magazine also runs a telephone technical help service and an Archimedes bulletin board called Eureka! which is open to public access at 1200/75 or 300/300, Viewdata or scrolling on 0603 – 250689.

■ *Micro-User*
▶ *Database Publications*
◀ *£1.50*

Although Micro-User is not solely based on the Archimedes computer, varying amounts related to the computer are included in each month's issue.

The magazine includes software and hardware reviews and various other articles.

■ *Acorn User Magazine*
▶ *Redwood Publishing*
◀ *£1.30*

All the Acorn ranges are covered in Acorn User, including the Archimedes system.

Acorn User comes out monthly and includes items such as articles on educational software, computer accessories and programming. Also included are reviews of software and hardware.

■ *RISC User*
▶ *Beebug Ltd*
◀ *£14.50 inc VAT*

This is a magazine and support group that was launched specifically for the Archimedes range of computers. The magazine is published ten times a year and is packed with programs, technical information, tutorials, news, reviews and comment exclusively on the Archimedes. Advantages of the group include technical support, advice, discounts and a BBC to Archimedes trade-in scheme.

ADDRESSES FOR ORDERING PRODUCTS

Argus Specialist Publications
A & B Computing
1 Golden Square
London
W1R 3AB
Tel: 01-437 0626

A & G Electronics
14 Hurstwood Avenue
Bexley
Kent
DA5 3PH
Tel: 0322 521949

Abacus Training
29 Okus Grove
Upper Stratton
Swindon
Wiltshire
SN2 6QA
Tel: 0793 723347

Abbey Audio
Unit 8 (First Floor)
Littleton House
Littleton Road
Ashford
Middx
TW15 1UU
Tel: 0784 246818

Academic Software
Sourby Old Farm
Timble
Otley
W Yorks
LS21 2PW
Tel: 0943-88 628

ACE Computing
27 Victoria Road
Cambridge
CB4 3BW
Tel: 0223 322559

Acorn Computers Limited
Fulbourn Road
Cherry Hinton
Cambridge
CB1 4JW
Tel: 0223 245200

A.P.L. Software
7 Ascendale
Deeping St James
Peterborough
PE6 8NZ

Armadillo Systems Ltd
17 Glaston Road
Uppingham
Leicester
LE15 9PX
Tel: 0572 822499

Autodesk Ltd
Southbank Technopark
90 London Road
London
SE1 6LN
Tel: 01-928 7868
Fax: 01-928 0283

AVP Computing
School Hill Centre
Chepstow
Gwent
NP6 5PH
Tel: 02912 5439

Aztec Software
25 St Mark Road
Deepcar
Sheffield
S30 5TF
Tel: 0742 862246/882921

Beebug Ltd
Dolphil Place
Holywell Hill
St Albans
Herts
AL1 1EX
Tel: 0727 40303
Fax: 0727 60263

Brainsoft Ltd
22 Baker Street
London
W1M 1DF
Tel: 01-486 0321

Burden Neurological Institute
Stoke Lane
Stapleton
Bristol
Avon
BS16 1QT
Tel: 0272 467444/565656

Cambridge Microsystems
19 Panton Street
Cambridge
CB2 1HL
Tel: 0223 66553

Careersoft
Dept ACI
5 Greenacres Avenue
Shelf Halifax
W Yorks
HX3 7RL
Tel: 0422 330450

CCD Computer Services
5 Fryer's Court
Boxworth End
Swavesey
Cambridge
CB4 5RA
Tel: 0954 30279

CJE Micros
78 Brighton Road
Worthing
West Sussex
BN11 2EN
Tel: 0903 213361

Clares Micro Supplies
98 Middlewich Road
Rudheath
Northwich
Cheshire
CW9 7DA
Tel: 0606 48511

COIC
Room N1108
MSC
Moorfoot
Sheffield
S1 4PQ
Tel: 0742 703116

Colton Software
Broadway House
149–151 St Neots Road
Hardwick
Cambridge
CB3 7QJ
Tel: 0954 211472

Computer Concepts
Gaddesden Place
Hemel Hempstead
Herts
HP2 6EX
Tel: 0442 63933
Fax: 0442 231632

Coventry Polytechnic
CALL Consultancy Group
Dept of Language Studies
Priory St
Coventry
CV1 5FB
Tel: 0203 224166 x2466

Contex Computing
15 Woodlands Close
Cople
Bedford
MK44 3UE
Tel: 02303 347

Dabs Press
5 Victoria Lane
Whitefield
Manchester
M25 6AL
Tel: 061 766 8423

Database Publications
Europa House
Adlington Park
London Road
Adlington
Macclesfield
Cheshire SK10 4NP

Data Store Software
6 Chatterton Road
Bromley
Kent
BR2 9QN
Tel: 01 460 8991

Datathorn Systems
George House
50 Spring Grove
Loughton
Essex
IG10 4QD
Tel: 01-508 49904

Design People Software
77 Grimwade Street
Ipswich
Suffolk
IP4 1LN
Tel: 0473 52555

Dixon and Dixon
Farm Management Consultants
35 Rokeby Drive
Kenton
Newcastle upon Tyne
NE3 4JY
Tel: 091 2853 042

Dobsoft
13 Pwll-y-Min Crescent
Peterson-Super-Ely
Cardiff
CF5 6LR
Tel: 0446 760440

Dudley Micro Services
30 Hadley Close
Netherton
Dudley
West Midlands
DY2 9JX

Edinburgh Software Products
c/o 6 Pypers Wynd
Prestonpans
East Lothian
Scotland
EH32 9AH
Tel: 0875 811 407

Educational Administrative Software
Somerville House
4 Brunswick Road
Withington
Manchester
M20 9GA
Tel: 061 445 1379

Electromusic Research
14 Mount Close
Wickford
Essex SS11 8HG
Tel: 0702 335747

Ergon Designs Ltd
Weaveland Road
Tisbury
Salisbury
Wiltshire
SP3 6HJ
Tel: 0747 870500

Nick Evans
PO Box 55
Grimsby
DN32 0QB

Fairhurst Instruments
Dean Court Woodhurst Road
Wilmslow
Cheshire
SK9 2LT
Tel: 0625 525694

The Fruit Factory
5 Woodlawn Street
Whitstable
CT5 1HG
Tel: 0227 277818

Galesoft
30 Barne Close
Nuneaton
Warks
CV11 4TP

Gem Electronics
17 Tandgragee Road
Portadown
Craigavon
BT62 3BQ

Genesis Ltd
Smallwood House
Bradfield St George
Bury St Edmunds
Suffolk
IP30 0AJ
Tel: 04493 358

Grandslam Entertainments Ltd
12–18 Paul Street
Leicester Place
London
WC2H 7NB
Tel: 01-247 6334
Fax: 01 247 5413

HCCS Associates
Engine Lane
575–583 Durham Road
Low Fell
Gateshead
NE9 5JJ
Tel: 091 487 0760

H.S. Software
Freepost
Swansea
W. Glam.
SA2 9ZZ
Tel: 0792 204519

Healthdata
21 Vicars Close
London
E9 7HT
Tel: 01-725 5601

Mr W. R. Hindle
18 Hoober Road
Sheffield
S11 9SF
Tel: 0742 620018

Hopesoft
Hope Cottage
Winterbourne
Newbury
Berks.
RG16 8BB

I.F.E.L.
36 Uplands Drive
Plymouth
Devon
PL6 6BD
Tel: 07555 7286

Ian Copestake Software
10 Frost Drive
Wirral
Merseyside
L61 4XL
Tel: 051 648 6287

Institute of Ophthalmology
University of London
Judd Street
London
WC1H 9QS
Tel: 01-387 9621 ext 224

Intelligent Interfaces Ltd
43B Wood Street
(Cooks Alley)
Stratford upon Avon
Warwickshire
CV37 6JQ
Tel: 0789 204069

Jansons
93 North Street
Stilton
PE7 3RR
Tel: 0733 244702

Kendata Peripherals Limited
Nutsey Lane
Totton
Southampton
SO4 3NB
Tel: 0703 869922
Fax: 0703 860800

Keele Mathematical Education

University of Keele
Department of
Education
Keele
Staffordshire
ST5 5BG
Tel: 0782 621111

Innocent Software
Benowyn
Park Farm Road
West Wycombe
Buckinghamshire
HP12 4AF

Lindis International Ltd
Wood Farm
Linstead Magna
Halesworth
Suffolk
IP1 0DX
Tel: 098 685476

Linear Graphics Ltd
Unit 39
Mochdre Industrial Estate
Newtown
Powys
SY16 4LE
Tel: 0686 29292
Fax: 0686 29563

Logotron
Dales Brewery
Gwydir Street
Cambridge
CB1 2LJ
Tel: 0223 323656

Longman Group UK Ltd
Longman House
Burnt Mill
Harlow
Essex
CM20 2JE
Tel: 0279 26721

Magenta Research Ltd
A.M.P. House (5th floor)
Dingwall Rd
Croydon
CR0 9XA
Tel: 01-680 7179

Mathematical Association
259 London Road
Leicester
LE2 3BE
Tel: 0533 703877

McSoft
36 Alfred Street
Dunstable
Bedfordshire
Tel: 0582 699483

Meadow Computers
11 London Street
Whitchurch
Hants
RG28 7LH
Tel: 0256 892008

MEWsoft
11 Cressy Road
London
NW3 2NB
Tel: 01 267 2642

Micro-Aid
25 Fore Street
Prae
Camborne
Cornwall
TR14 0JX
Tel: 0209 831274

Micro Librarian
Staley Cottage
Ridge End Fold
Marple
Stockport
Cheshire
SK6 7EX
Tel: 061 449 9357

Micro Studio
22 Church Gae Street
Soham, Ely
CB7 5DS
Tel: 0353 721736

Millipede Electronics Graphics
12 Pryor Close
Milton
Cambridge
CB4 4BU
Tel: 0223 862066

Minerva Systems
69 Sidwell Street
Exeter
EX4 6PH
Tel: 0392 37756/410137

Mitre Software Ltd
International House
26 Creechurch Lane
London
EC3A 5BA
Tel: 01-283 4646
Fax: 01-283 5614

Musbury Consultants
8 Fairhill
Helmshore
Rossendale, Lancs
BB4 4JX
Tel: 0706 216701

Northern Micromedia
Resources Centre
Coach Lane Campus
Coach Lane
Newcastle upon Tyne
NE7 7XA
Tel: 01-270 0424

Norwich Computer Services
18 Mile End Road
Norwich
NR4 7QY
Tel: 0603 507057

Novo Biolabs Ltd
St John's Innovation Centre
Cowley Road
Cambridge
CB4 4WS
Tel: 0223 341060

Number 3 Software
3 Dairy Farm Court
Attleborough
Norfolk
NR17 2BT
Tel: 0953 454902

Oak Professional Software
Cross Park House
Low Green
Rawdon, Leeds
LS1 6HA
Tel: 0532 502615

Peter Nelson Design

The Street
Old Costessey
Norwich
NR8 5DF
Tel: 0603 747887

Qudos Limited
Cambridge Science Park
Milton Road
Cambridge
CB4 4FD
Tel: 0223 862333

Ralph Allen Engineering Company
Forncett-End
Norwich
Norfolk
NR16 1HT

Redwood Publishing
20–26 Brunswick Place
London N1 6PJ

Resource
Exeter Road
Off Coventry Grove
Doncaster
DN2 4PY
Tel: 0302 63800/63784

Remedian Instruments Ltd
3 Over Links Drive
Poole
Dorset
BH14 9QU
Tel: 0202 708404

Scetlander Ltd
74 Victoria Crescent Road
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